Health Status of Racial and Ethnic Minorities in Nebraska Report

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NEBRASKA HEALTH AND HUMAN SERVICES SYSTEM

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HEALTH STATUS OF RACIAL AND ETHNIC MINORITIES IN NEBRASKA

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ADA/AA/EOE

Opening Statement
From the Director, Ron Ross

April, 2001

Dear Health Advocate:

We are pleased to provide you with the year 2001 comprehensive report, "Health Status of Racial and Ethnic Minorities in Nebraska."

Most people in Nebraska enjoy a relatively healthy and good quality of life. There continues, however, to be significant disparity in the overall health status and quality of life for racial/ethnic minorities in Nebraska. Since the establishment of the Office of Minority Health and Human Services, it has become increasingly apparent that health care professionals and consumers must develop effective ways of meeting the challenges presented by our rapidly changing and culturally diverse society.

This report presents a description of the disparity in health status, access to health care, and prevalence of risk factors between the white population of Nebraska and each of the four largest racial and ethnic minority population groups in the state. Our goal, with your assistance, is to eliminate the disparity in health outcomes and increase the access to quality health care among racial and ethnic minorities in the 21st century.

We thank you for your interest in this report and hope you find the information useful in planning, implementing and evaluating public health efforts.

For more information or additional copies of this report, please contact the Nebraska Office of Minority Health and Human Services at (402) 471-0152.

Respectfully,

Ron Ross, Director
Nebraska Health and Human Services

EXECUTIVE SUMMARY

Introduction

Addressing the challenge of improving the health of members of racial and ethnic populations is a shared responsibility that requires the active participation and leadership of government—federal, state and local; health care providers; businesses; educators; community leaders; advocacy groups; and the public. In order to meet this responsibility, Nebraska needs to ascertain the current health status of racial and ethnic minorities and to establish goals and objectives to achieve improvement. This report is a first step and builds upon "Nebraska's Racial and Ethnic Minorities and Their Health: An Update" published in 1996.

The U.S. Surgeon General has established a goal of zero disparities in health status between the racial/ethnic minority population and the white population by the year 2010. Many studies at both the national and state levels have documented these disparities.

Data collection, analysis, and reporting are vitally important. Limited data on racial and ethnic minority health conditions can make it difficult for agencies to identify health disparities, justify the need for special initiatives targeted toward these populations, and measure progress made by state initiatives. It is important to examine and analyze the ability of current data collection systems to set baseline standards for minority health status.

This document is a compilation of data and information about the health status of racial and ethnic minorities in Nebraska. The data utilized in this report derives from various sources of the Health and Human Services System. The purpose for this document is to provide a picture of the current health status of racial and ethnic minorities in the state.

This report presents some of the most striking disparities in health status, access to health care, and prevalence of risk factors between the white population of Nebraska and each of the four largest racial and ethnic minority population groups in the state. The identification of these disparities is an important step in the effort to eliminate them and will help the HHS System develop appropriate intervention strategies.

Nebraska's Office of Minority Health and Human Services serves a pivotal role for federal, state, tribal and local efforts as they work together to improve the health status of the state's racial and ethnic minority populations. Eliminating disparities will require a strong partnership among both the traditional and nontraditional public health-related organizations.

Summary of Results

HEALTH STATUS OF RACIAL AND ETHNIC MINORITIES IN NEBRASKA

- According to the 1990 U.S. Census reports for Nebraska, Native Americans have the highest rates for poverty followed by African Americans.

- Access to health care indicates that eight percent of Nebraskans 18 and older, as well as ten percent of African Americans, 18 years and older, have no health insurance. Seventeen percent of Native Americans could not afford to see a doctor due to cost, according to the Nebraska 1994-1998 BRFSS.

- Although mortality rates and incidences are in some instances high for different health indicators, they varied among racial and ethnic groups and in many cases higher than white Nebraska as can be seen in the report. For instance, the death rate due to diabetes is 2.5 times as high for African Americans, and 4.0 times as high for Native Americans as the rate for white Nebraskans. The incidence of diagnosed cases of HIV/AIDS for Hispanic Americans is 4.0 times the white rate and for Native Americans, 1.7 times the white rate. Incidence of diagnosed cases of STD for African Americans is 16.6 and those for Asian Americans is 3.6 times as high as the white rate *(Table 2)*.

DEMOGRAPHICS*

The racial and ethnic minority population comprises approximately 10.2 percent of the state's total population. In 1999, Nebraska's estimated population was 1,666,028.

- Between 1995 and 1998, the minority population in Nebraska grew by 43.6 percent, while the population of the state as a whole grew by 5.2 percent and the white population increased by 4.1 percent. The racial and ethnic minority population continues to grow much more rapidly than the white population.

- Hispanics now make up 4.4 percent of Nebraska's total population, numbering more than 72,519. The number of African Americans is 67,173 or 4.0 percent of the total population in Nebraska. Asian Americans number 21,838 or 1.3 percent of Nebraska's population while Native Americans number 14,839 or 0.9 percent of the Nebraska total population. Every person has race and ethnic origin as two individual attributes. The percent of the total population who are racial or ethnic minorities (10.2 percent) includes all African Americans (4.0 percent), Native Americans (0.9 percent), and Asian Americans (1.3 percent) - both those who are of Hispanic origin and those who are not. This total minority figure also includes all white Nebraskans who are of Hispanic origin - 4.0 percent of the total population. (The remaining 0.4 percent Hispanics are non-white and have already been counted as minorities since their race is African American, Native American, or Asian American).

- The Hispanic community in Nebraska is the largest and most rapidly expanding minority population in the state. Since 1990, the Hispanic population has increased by 94.9 percent according to the 1998 census data. The Asian American population has grown 71 percent, the African American population has grown 15.7 percent, while the Native American population has grown 15.3 percent, and the white population has grown only 4.1 percent. The population of Nebraska as a whole grew 5.2 percent from 1990 to 1998.

- It is estimated that the African American population will expand by 63 percent for a total of 109,000 in 2025. Native Americans are expected to reach 25,000 people or an increase of 67 percent by 2025 while the number of Hispanic Americans in the state will reach approximately 145,000 or an increase of 99 percent by 2025. The Asian American population in Nebraska is expected to reach 40,000, increasing by about 90 percent by 2025. The health implications and related needs of the growing racial and ethnic minority population will have an impact on the health care delivery system in the state.

** According to the 2000 population data recently released by the U.S. Census Bureau, the racial and ethnic minority population comprises approximately 216,769 or 12.7 percent of the state's total population (1,711,763). Hispanics now make up 5.5 percent of Nebraska's total population, numbering 94,425. African Americans now make up 75,833 or 4.4 percent of the state's total population. Native American population now is 22,204 or 1.3 percent of the state's total population. The Nebraska Asian American population now is 28,542 or 1.7 percent of the state's total population.*

DISPARITIES AMONG RACIAL AND ETHNIC MINORITY GROUPS IN NEBRASKA

Tables 1 through 3 present some of the most striking disparities in health status, access to health care, and prevalence of risk factors between the white population of Nebraska and each of the four largest racial and ethnic minority population groups in the state.

- The average life expectancy for the state of Nebraska in the three-year period, 1996-1998 was 77.9 years for whites, 70.1 years for African Americans and 68.1 years for Native Americans.

- In Nebraska, the age-adjusted YPLL rate for 1994-1998 for all races combined was 6,720 years per 100,000 population, indicating a decrease of 296 years per 100,000 when compared to the 1989-1993 YPLL rate (7,016). The current Nebraska rate is also lower than the overall U.S. rate.

- Heart disease is the leading cause of death among African Americans, Native Americans, Hispanic Americans, and whites in Nebraska. Native Americans have the highest rate of mortality (452.7 deaths per 100,000 population) and are 1.7 times as likely to die of heart disease as whites.

- The death rate due to stroke is 1.7 times as high for African Americans and 1.3 times as high for Native Americans as the rate for white Nebraskans.

- In the five-year period, 1994-1998, cancer was the leading cause of death among Asian Americans. In the same period, cancer was the second leading cause of death among African Americans, Native Americans, Hispanics and white Nebraskans. African Americans are 1.4 times more likely to die from cancer than white Nebraskans.

- African Americans (43 percent of adults) and Hispanic Americans (34 percent) are more likely than white Nebraskans (30 percent) to be overweight.

- African Americans have the highest number of low weight births (120.0 per 1,000 live births) in Nebraska. Both Native Americans (117.5 births per 1,000 adolescent girls) and African Americans (100.8) have high rates of teen births.

- Native Americans have the highest rates for motor vehicle fatalities and unintentional injury deaths of any racial or ethnic group in Nebraska for 1994-1998.

- Native Americans in the state are 4.0 times more likely to die of diabetes-related causes, than white Nebraskans. The diabetes-related death rate for African Americans is 2.5 times greater and the rate for Hispanic Americans is 1.4 times greater than the rate for white Nebraskans.

- African Americans and Hispanic Americans in Nebraska have the highest incidence of HIV/AIDS, with African Americans having a relative risk of 8.1 and Hispanic Americans, 4.0.

AFRICAN AMERICANS

- According to 1998 U.S. Census Estimates, African Americans comprise 4.0 percent of the population of Nebraska.

- The proportion of African Americans in Nebraska living in poverty (31.1 percent) is more than three times the rate for white residents (9.9 percent). This rate is also higher than the poverty rates for every other racial or ethnic minority group in the state except Native Americans (46.2 percent), according to the U.S. Census data.

Access to Care

- Ten percent of African American adults in Nebraska reported having no health insurance, compared to 8 percent of white adults. Seven percent were unable to see a doctor at some time in the last twelve months due to potential cost of care *(Table 1)*.

- African Americans were more likely to have had a routine check-up in the past year (76 percent) than white Nebraskans (66 percent).

Table 1
Summary of Access to Care and General Health Indicators
Among Nebraskans Age 18 and Older
By Race or Ethnic Origin

Indicator	African American (%)	Native American (%)	Asian American (%)	Hispanic American (%)	White (%)
No health insurance	10	NA	NA	17	8
Unable to see doctor due to cost in past 12 months	7	NA	NA	17	7
No routine checkup in past 12 months	24	NA	NA	31	34
Mothers receiving inadequate prenatal care (Kotelchuk Index)	21.5	24.8	12.0	22.8	8.8
Self-rated health status "fair" or "poor"	20	NA	NA	14	11

NA = Not Available. There were too few Native American and Asian American respondents to the Nebraska Behavioral Risk Factor Surveillance System to allow prevalence estimates to be determined for these population groups.

SOURCES: Inadequate prenatal care data from Vital Statistics in Nebraska HHSS.
Remaining data--1994-1998 Nebraska Behavioral Risk Factor Surveillance System.

Health Status

- One-fifth of African American adults (20 percent) rated their health status as either "fair" or "poor," compared to 11 percent of white Nebraskans.

- More than one-fifth of African American mothers (21.5 percent) received inadequate prenatal care, based on the Kotelchuk Index.

- Infant mortality rate was twice as high for African Americans as for whites in 1994-1998 *(Table 2)*. This rate was also higher than the rates for other racial/ethnic groups in Nebraska. Low birthweight rates for African Americans were also double the rate for whites.

Table 2
Disparity in Selected Health Status Indicators
of Nebraska's Racial/Ethnic Minority Residents
Relative Risk of Mortality or Infection Compared to White Population
1994-1998 vs. 1989-1993

Population Group	RELATIVE RISK OF MORTALITY OR INFECTION IS 1.5 OR GREATER* AND . . .					
	Rate Increased for:	Relative Risk	Rate Remained Stable for:	Relative Risk	Rate Decreased for:	Relative Risk
African Americans	Homicides	12.0	Low Birth Weight	2.0	STD Incidence	16.6
	HIV/AIDS Incidence	8.1			Cirrhosis Deaths	2.4
	HIV/AIDS Deaths	4.8			PostNeonatal Mortality	2.2
	Diabetes-Related Deaths	2.5			Infant Mortality	2.1
	Prostate Cancer Deaths	1.9			Cancer Deaths (Males)	1.6
	Stroke Deaths	1.7			Heart Disease Deaths	
	Colorectal Cancer Deaths	1.5			(Females)	1.5
Native Americans	Diabetes-Related Deaths	4.0			Cirrhosis Deaths	14.5
	Stroke Deaths (Males)	2.1			STD Incidence	5.6
	Heart Disease Deaths	1.7			Homicides	3.9
	HIV/AIDS Incidence	1.7			PostNeonatal Mortality	2.8
					Unintentional Injury Deaths	2.1
					Motor Vehicle Fatalities	1.9
Hispanic Americans	HIV/AIDS Incidence	4.0			Diabetes-Related Deaths	
	Homicides	3.9			(Females)	1.6
	STD Incidence	3.4				
	Cirrhosis Deaths	2.5				
Asian Americans	STD Incidence	3.6				

*Relative risk for whites is 1.0 throughout this table.

SOURCE: Nebraska HHSS, Vital Statistics, HIV/AIDS Surveillance Program, Communicable Disease Section.

- Life expectancy for African Americans is 70.1 years, with life expectancy for African American males (67.4 years) lower than that for females (72.8 years).

- African Americans lost more than twice as many years of potential life (YPLL) per 100,000 population (13,396) as white Nebraskans (6,414).

- Heart disease (620 deaths) and cancer (489 deaths) were the number one and two leading causes of death among African Americans in the five-year period 1994-1998.

- African American males are 15 times more likely to die as a result of homicide than white males, making this the fourth leading cause of death among this group.

- Incidence of diagnosed cases of AIDS among this population group is up 21 percent from the previous five-year period, according to Nebraska's Health and Human Services System's HIV/AIDS Surveillance Program. Incidence among whites was stable, averaging 5.7 cases per 100,000 population annually in 1995-1999. The incidence rate for AIDS among African Americans (46.1) is 8.1 times the white rate. African Americans are also 4.8 times as likely to die of AIDS as whites in Nebraska (Table 2).

- Mortality rates for strokes, colorectal cancer, prostate cancer and diabetes-related causes among African Americans also increased in the current five-year period. African Americans are 1.7 times as likely as white Nebraskans to die from strokes and 2.5 times as likely to die from diabetes-related causes. Colorectal cancer death rates are 1.5 times as high for African Americans as they are for whites. African American men are also 1.9 times as likely to die from prostate cancer as white men in the state.

- The incidence of sexually-transmitted disease (STDs) is currently 16.6 times as high for African Americans as for whites and also much higher than rates for other racial/ethnic groups in the state.

- Reduction has been made in cervical cancer mortality among African American women, yet they are 1.4 times as likely to die from cervical cancer as white women.

Risk Factor Prevalence

The following information was developed from the data collected by the Nebraska Behavioral Risk Factor Surveillance System (BRFSS) in 1994-1998.

- ❖ African Americans continue to report a higher prevalence of overweight and cigarette smoking than white Nebraskans *(Table 3)*. Prevalence of no leisure time physical activity for this group is about the same as for Hispanics; rates for both of these groups were a little higher than the white rate.

- ❖ Nonuse of seatbelts is at the same level as the rate for whites. Twenty-three percent of adults did not "always" or "nearly always" wear seat belts.

- ❖ The rate of binge drinking among African Americans is lower than rates for both Hispanics and whites.

Table 3
Summary of Risk Factor Prevalence
Among Nebraskans Aged 18 and Older
By Race or Ethnic Origin

Indicator	African American (%)	Native American (%)	Asian American (%)	Hispanic American (%)	White (%)
LIFESTYLE RISK FACTORS*					
Cigarette smoking	27	NA	NA	25	21
Overweight (BMI)	43	NA	NA	34	30
No leisure-time physical activity	27	NA	NA	28	24
Nonuse of seatbelts	23	NA	NA	30	23
Binge drinking	11	NA	NA	17	17
LACK OF SCREENING*					
Blood pressure checked (past 2 years)	96	NA	NA	92	93
Cholesterol level checked (past 5 years)	92	NA	NA	95	90
Ever had mammogram (women aged 40 and older)	82	NA	NA	74	77
Pap test in past 2 years (women aged 18 and older)	81	NA	NA	83	74
MATERNAL AND CHILD HEALTH FACTORS**					
Inadequate prenatal care (Kotelchuk Index)	21.5	24.8	12.0	22.8	8.8
Mothers who smoked during pregnancy	16.6	34.8	5.2	6.3	17.1
Teen births/1,000 females (aged 15-19)	100.8	117.5	24.5	98.2	34.2

NA = Not Available. There were too few Native American and Asian American respondents to the Nebraska Behavioral Risk Factor Surveillance System to allow prevalence estimates to be determined for these population groups.

*Nebraska HHSS, 1994-1998 Nebraska Behavioral Risk Surveillance System.
**Nebraska HHSS, Vital Statistics.

- African Americans are generally more likely than members of other racial/ethnic minority groups in Nebraska to receive health screening. Compared with rates from other ethnic groups, African Americans reported higher rates for blood pressure checks and mammogram tests. Rates for Pap tests and cholesterol level checks were higher than corresponding rates for white adults in Nebraska.

- The proportion of African American mothers who received inadequate prenatal care has improved, but still remains more than twice as high as the proportion of white mothers receiving inadequate prenatal care.

- African American mothers report a higher prevalence of cigarette smoking during pregnancy than Asian and Hispanic Americans. However, the rate for African American mothers nearly matches the white rate and is less than half the Native American rate.

- The teen birth rate for African Americans declined moderately from 133.4 in 1989-1993 to 100.8 births per 1,000 girls in the current five-year period, but still remains about three times as high as the rate for white teenagers.

NATIVE AMERICANS

- Native Americans make up 0.9 percent of the total population of Nebraska.

- The proportion of Native Americans living in poverty (46.2 percent) is higher than the rate for every other racial or ethnic group in Nebraska and is more than four times the rate for white Nebraskans (9.9 percent), according to data from the U.S. Census.

Access to Care

- The percent of Native American mothers who did not receive first trimester prenatal care decreased to 31.5 percent for 1994-1998.

- Native American mothers reported the highest percentage (24.8) receiving inadequate prenatal care when compared with mothers from other racial/ethnic groups (Table 1). The proportion receiving inadequate prenatal care was more than twice as large as the proportion of white mothers (8.8) receiving inadequate prenatal care.

Health Status

- For 1994-1998, Native Americans lost 2.7 times as many years of potential life per 100,000 population (17,233) as whites (6,414) in Nebraska.

- Life expectancy, a general indicator of health status, is 68.2 years for all Native Americans, 64.2 for men, and 72.3 for women.

- Native Americans report the highest mortality rate due to cirrhosis of the liver of any racial/ethnic group in Nebraska (Table 2). Although the current rate has declined from the previous five-year period, the relative risk of mortality is 14.5 times as high for Native Americans as for whites in the state.

- Current relative risk of infection with a sexually transmitted disease is 5.6 times as high for Native Americans as for white Nebraskans.

- Native Americans reported the highest rate of diabetes-related deaths (261.9 per 100,000) of any racial/ethnic group in the state. Rates have increased and are now 4.0 times the rate for white Nebraskans.

- The homicide rate for Native Americans decreased by 64 percent in 1994-1998, compared to the previous five-year period. However, Native Americans are still 3.9 times as likely to die as a result of homicide as white Nebraskans.

- Native Americans have experienced an increasing mortality rate due to heart disease. Relative risk of death due to heart disease has also shown a corresponding increase, with Native Americans now reporting the highest mortality rate due to heart disease of any racial/ethnic group in the state. Native Americans are now 1.7 times as likely as white Nebraskans to die from heart disease.

- The incidence of HIV/AIDS among Native Americans in Nebraska has increased in the period 1994-1998 compared to the previous five-year period, with Native Americans now 1.7 times as likely as white residents to be diagnosed with HIV/AIDS.

- Significant improvements have been noted for some indicators. The infant mortality rate for Native Americans has declined by nearly 50 percent from the previous five-year period to a 1994-1998 rate of 8.3 deaths per 1,000 live births. The current rate of 8.3 is lower than the national infant mortality rate of 10.9 for this group.

- The teen birth rate (117.5 percent) for Native American girls aged 15 to 19 is more than three times the rate for white teenagers.

- Post-neonatal mortality (deaths of infants between 28 days and one year of age) also decreased for Native American babies, from 3.3 times the white rate in the previous five-year period to 2.8 in 1994 - 1998.

- The mortality rate for unintentional injuries among Native Americans (the third leading cause of death) declined slightly from the previous five-year period. However, Native Americans were still twice as likely as whites to die from unintentional injuries. Similarly, Native Americans were 1.9 times as likely as whites in the state to die as a result of injuries sustained in motor vehicle crashes.

Risk Factor Prevalence

- The percentage of Native American mothers receiving inadequate prenatal care based on the Kotelchuk Index decreased to 24.8 percent in the 1994-1998 period (Table 3). However, this figure is still 2.8 times the proportion of white mothers not receiving adequate care during pregnancy.

- More than one-third of Native American mothers (34.8 percent) smoked during pregnancy. This is more than twice the rate for white and African American mothers, and five to six times the rates for Asian and Hispanic American women in Nebraska.

ASIAN AMERICANS

- Asian Americans account for 1.3 percent of Nebraska's total population.

- The 1990 poverty rate for Asian Americans (20.1) was slightly more than double the rate for whites (9.9) in Nebraska.

Access to Care

- Twelve percent of Asian American mothers received inadequate prenatal care in 1994-1998, based on the Kotelchuk index, compared to 8.8 percent of white mothers in Nebraska (Table 1).

Health Status

- Asian Americans fared better than white Nebraskans in terms of years of potential life lost. Asian Americans lost a little more than half as many years of potential life per 100,000 population (3,504) as white Nebraskans.

- In general, mortality rates among Asian Americans are lower than or comparable to the rates for white Nebraskans.

- The incidence of sexually-transmitted disease among Asian Americans has increased by 46 percent in the period 1994-1998 compared to the previous five-year period and is currently 3.6 times the rate for whites in the state *(Table 2)*.

- In the five-year period, 1994-1998, cancer was the leading cause of death among Asian Americans. In the same period, cancer was the second leading cause of death among African Americans, Native Americans, Hispanics and white Nebraskans.

Risk Factor Prevalence

- The proportion of Asian American mothers who smoked during pregnancy was small, (5.2 percent), compared to 17.1 percent of white mothers *(Table 3)*.

- The rate of births to girls aged 15 to 19 in the Asian community is very low (24.5 births per 1,000 females) when compared to rates for other racial/ethnic minority groups. The teen birth rate for Asian Americans in Nebraska is also lower than the rate for white adolescents (34.2).

HISPANIC AMERICANS

- Based on 1998 U.S. Census estimates, Hispanic Americans make up the greatest share of the minority population in Nebraska, numbering 72,519 persons or 4.4 percent of the total population.

- The 1990 poverty rate for Hispanic Americans in Nebraska (22.7 percent) was more than double the rate for white Nebraskans (9.9 percent).

Access to Care

- Seventeen percent of adult Hispanic Americans in Nebraska have no health insurance, compared to only 8 percent of white Nebraskans (Table 1). Seventeen percent of Hispanic adults state they were unable to see a doctor at some time in the past twelve months because of the potential cost of care.

- Thirty-one percent of Hispanic Americans in the state had no routine check up in the last 12 months.

- Nearly one-fourth of Hispanic American mothers reported receiving inadequate prenatal care, according to the Kotelchuk Index (22.8 percent), compared to 8.8 percent of white mothers in Nebraska.

Health Status

- Hispanic Americans in Nebraska self-rated their health status as either "fair" or "poor" 14 percent of the time, while 11 percent of whites rated their health this way.

- Hispanic Americans reported a 12 percent increase in the years of potential life lost (YPLL) per 100,000 population in 1994-1998 (6,514) compared to the previous five-year period (5,820). For 1994-1998, the rate of YPLL per population for Hispanic Nebraskans was very near the rate for whites in the state.

- The incidence of diagnosed cases of HIV/AIDS among Hispanic Americans has risen to 23.0 new cases per 100,000 for 1995-1999. Hispanic Americans in Nebraska are now 4.0 times as likely as white residents to contract HIV/AIDS.

- The homicide rate for this population group has increased substantially since 1989-1993. The homicide rate for Hispanic Americans is now 3.9 times the rate for white residents of the state.

- The incidence of sexually transmitted diseases has increased sharply, with relative risk of infection rising to 3.4, more than triple the risk for whites.

- The motor vehicle fatality rate for Hispanic Americans decreased slightly, so that persons from this population group were only slightly more likely to die from motor vehicle crashes than white Nebraskans.

- Diabetes-related mortality rates for females were down a little in 1994-1998; still, Hispanic Americans were 1.6 times as likely to die from this cause as white females.

- Hispanic American babies are 1.2 times as likely as white infants to die within their first year of life.

- Hispanic Nebraskans are 2.5 times as likely to die from cirrhosis of the liver as whites in the state.

Risk Factor Prevalence

- Prevalence rates for four "lifestyle" risk factors are higher for Hispanic Americans than for white Nebraskans: cigarette smoking, overweight, physical inactivity, and nonuse of seatbelts (*Table 3).* Prevalence of binge drinking among Hispanic Americans matched the white rate.

- The teen birth rate for Hispanic Americans, is nearly triple the rate for white adolescents in the same age group (ages15-19).

- The proportion of Hispanic American mothers who received no prenatal care or care beginning after the first trimester has shown some improvement. In 1994-1998, 32.7 percent of all Hispanic mothers did not receive prenatal care beginning in the first three months of pregnancy, compared to 37.3 percent in 1989-1993. Hispanic American mothers were more than twice as likely as white mothers to receive no first-trimester care.

- Hispanic American women aged 40 and older are less likely than African American or white women in this age group to have ever received mammograms, although the majority (74 percent) in this age range did have this test done.

- A slightly greater proportion of Hispanic American women reported having a Pap test (83 percent) in the past two years than either African American or white women.

Methodology

The findings in this report are based on age-adjusted death rates which change as the age distribution of the state's population changes. Age-adjusted rates indicate changes in the risk of death more effectively than crude rates. Age-adjusted rates are also better indicators for comparisons of mortality by sex or racial subgroup. Mortality rates in this report have been age-adjusted to the 2000 standard age distribution of the U.S. population, unless otherwise indicated.

The definitions for causes of death follow the Ninth Revision of the International Classification of Disease. There are two terms that are used frequently in this report that require definition. One is "relative risk" and the other is "years of potential life lost."

In this report, the disparity in health between Nebraska's racial/ethnic minority and majority populations is determined by the measure of ***relative risk.*** Therefore, for each health status indicator discussed:

$$\textbf{Relative Risk} = \frac{\textbf{Mortality (or Incidence) Rate of Minority Population}}{\textbf{Mortality (or Incidence) Rate of White Population}}$$

A value of 1.0 indicates that the racial/ethnic minority population has a rate equal to that of the white population. A relative risk of less than 1.0 means that the minority population is less likely than the white population to die of or develop a certain type of disease. If the relative risk is greater than 1.0, the minority population suffers proportionally more illness or deaths from this condition than the white population.

Relative risk calculations, along with morbidity and mortality rates, are presented for nine important health problems for each racial/ethnic minority group (African Americans, Hispanic Americans, Native Americans, and Asian Americans/Pacific Islanders). In cases where the number of deaths for a particular cause is extremely small, mortality rates and relative risk are not shown.

Years of potential life lost (YPLL) are also presented for leading causes of death. This indicator is a measure of premature death. In the calculation of YPLL, using 75 productive years of life as the basis, infants who die before their birthday have lost 74.5 years of life; a person dying at age 50 years has lost 25 years of life. Therefore, the younger the age of the person at death, the more years of potential life are lost.

Data Limitations

Operationally, the term "racial and ethnic minority" is generally used throughout this report. However, the term "minority" may also be used to refer to persons who are members of racial or ethnic minority groups.

When reading this report, keep in mind that Nebraska data on racial/ethnic minority health status are limited. Since the number of persons in minority population groups is relatively small in comparison to the total population of the state, rates for a particular disease may be based on a very small number of cases and may not be reported in this document. To increase the number of cases in these categories, rates have generally been calculated using five years of combined data.

In addition, the racial and ethnic minority classifications used for purposes of analysis may be extremely heterogeneous. For example, while most Native Americans in Nebraska are American Indians, there may be significant differences in health status among the various tribes. Similar differences may also exist among groups of persons classified as Hispanic Americans, or Asian and Pacific Islanders. The term "Asian Americans" will be used in this report to refer to Asians and Pacific Islanders.

It is equally necessary to keep in mind that disparities in income levels or educational attainment and problems in getting access to health care may greatly influence variations between racial or ethnic groups and within them, as well.

Data from the 2000 Minority Behavioral Risk Factor Survey (MBRFS) are not yet available for use in this report. Since risk factor prevalence data are important in discussing the health of population groups, data from the 1994-1998 Nebraska Behavioral Risk Factor Surveillance System (BRFSS) has been presented instead. The Nebraska BRFSS is not useful in assessing risk in the state's minority populations because the sample size is insufficient for smaller racial and ethnic minority groups. Even when combining multiple data years, the numbers of Asian American and Native American respondents are too small to allow meaningful analysis. Thus, risk factor prevalence data may be limited data for Asian Americans and Pacific Islanders and the Native American population.

RESULTS AND DISCUSSION

Demographics: Description of Nebraska's Racial/Ethnic Minority Populations

According to the U.S. Census Bureau, the total population in the State of Nebraska was 1,569,825 in 1980; 1,580,622 in 1990, and 1,662,719 in 1998. Between 1990 and 1998, the white population increased 4.1 percent and the total population increased by 5.2 percent (Table 4). In 1999, the estimated population was 1,666,028.

From 1990 to 1998, Nebraska's racial/ethnic minority population grew from 118,290 to 169,811, a 43.6 percent increase. Based on the 1998 U.S. Census estimates (the latest data available at the time of this report), racial and ethnic minorities comprise 10.2 percent of Nebraska's total population*. African Americans now make up about 4.0 percent of the population while Hispanic Americans comprise 4.4 percent of the population, making them the largest minority group in the state. Native Americans make up about 0.9 percent, while Asian Americans account for 1.3 percent of the population of Nebraska.

The size of the racial/ethnic minority population in Nebraska is believed to be underestimated, particularly for Hispanic Americans in the state. The mobility of this segment of the population, particularly migrant workers and their families, as well as the presence of an undetermined number of undocumented workers makes it difficult to arrive at an accurate number. Likewise, the number of Asian Americans in Nebraska may also be underestimated to some extent, as a result of the influx of recent immigrants.

TRENDS

Between 1990 and 1998, the number of Nebraskans who identified themselves as white increased by about 4.1 percent (i.e., from 1,480,558 in 1990 to 1,558,869 in 1998). In comparison, the number of minority residents in each of the racial and ethnic categories experienced substantial growth. Although the number of African American residents showed a strong increase from 58,043 in 1990 to 67,173 in 1998 (15.7 percent growth), this community is no longer the largest minority group according to the 1998 U.S. Census estimates.

The largest minority group in the state now is the Hispanic American population which experienced the most dramatic increase by almost doubling from 37,201 in 1990 to 72,519 (a 94.9 percent increase). Both the Native American (+15.3 percent) and the Asian American (+71.0 percent) segments of the population increased substantially, with the Asian community almost doubling in size from 12,422 in 1990 to 21,838 in 1998 *(Table 4)*.

**Every person has race and ethnic origin as two individual attributes. The percent of the total population who are racial or ethnic minorities (10.2 percent) includes all African Americans (4.0 percent), Native Americans (0.9 percent), and Asian Americans (1.3 percent) - both those who are of Hispanic origin and those who are not. This total minority figure also includes all white Nebraskans who are of Hispanic origin - 4.0 percent of the total population. (The remaining 0.4 percent Hispanics are non-white and have already been counted as minorities since their race is African American, Native American, or Asian American).*

Table 4
Growth in Nebraska's Population
By Race and Ethnic Group
1990 vs. 1998

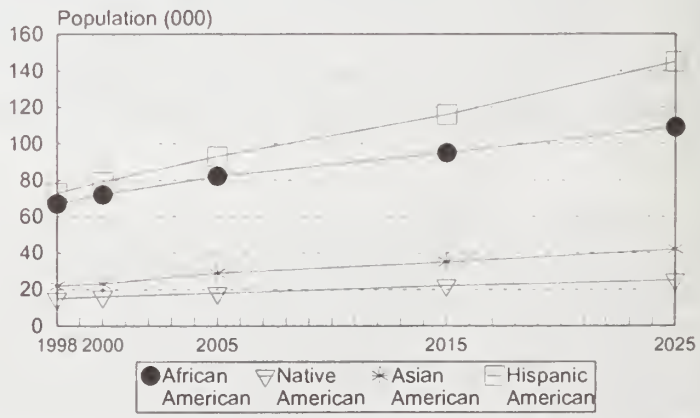
	Total Population	White	African American	Native American	Asian American	Hispanic American
All Nebraskans (1998)	1,662,719	1,558,869	67,173	14,839	21,838	72,519
% of Total	100.0%	93.8%	4.0%	0.9%	1.3%	4.4%
Hispanic Americans	72,519	65,961	NON-WHITE HISPANICS = 6,558 (9.0%)			
% of All Hispanics	100.0%	91.0%				
Non-Hispanic Americans	1,590,200	1,492,908	NON-WHITE NON-HISPANICS = 97,292 (6.1%)			
% of All Non-Hispanics	100.0%	93.9%				
Percent Change in Number of All Nebraskans (1998 vs. 1990)	5.2%	4.1%	15.7%	15.3%	71.0%	94.9%
Hispanic Americans	94.9%	91.4%	NON-WHITE HISPANICS – 139.9%			
Non-Hispanic Americans	3.0%	4.1%				

*Hispanic and non-Hispanic totals are not available for African Americans, Asian Americans, and Native Americans.
Hispanic Americans may be of any race.

SOURCE: 1990 U.S. Census and 1998 U.S. Census Estimates.

The U.S. Census Bureau forecasts continued strong growth in the Hispanic American and Asian American segments of Nebraska's population by the year 2025 *(Figure 1)*. It is estimated that the number of Hispanic Americans in the state will reach approximately 145,000 by 2025, nearly double (+99%) the 1998 population. The number of Asian Americans will reach about 40,000 by 2025, an increase of 90 percent over 1998 totals. Numbers of African and Native Americans are also expected to increase considerably by 2025. The African American population is projected to grow by 63 percent (109,000 people), while an increase of 67 percent is predicted for Nebraska's Native American community (25,000 people by 2025). In contrast, the white population is projected to grow by only about 10 percent over this time period.

Figure 1
Projected Growth in Nebraska's Population by Race and Ethnic Origin

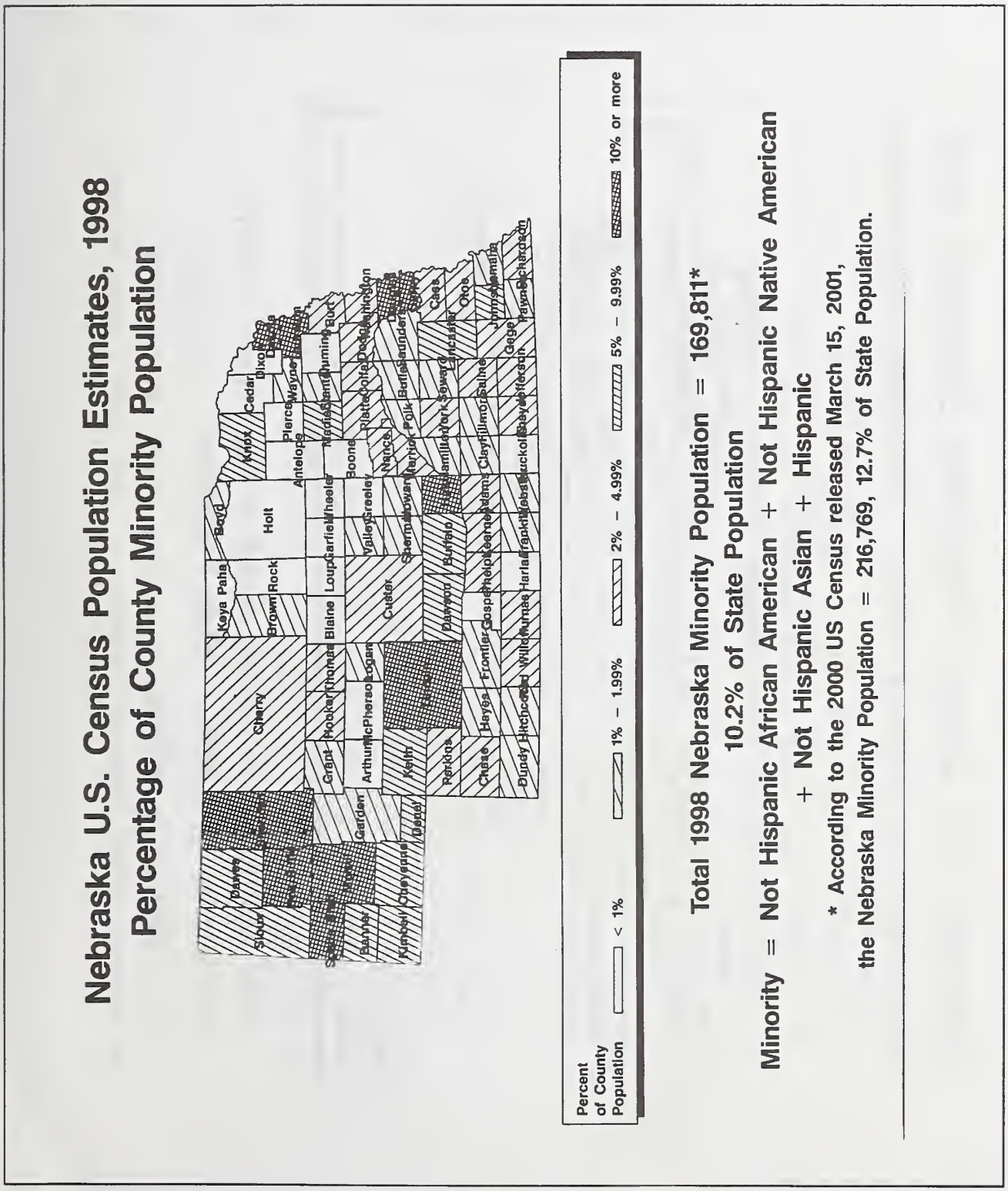


NOTE: Hispanic projections have been recalculated by applying projected percent changes to 1998 Census population estimates.
SOURCE: U.S. Census projections.

Geographic Location:

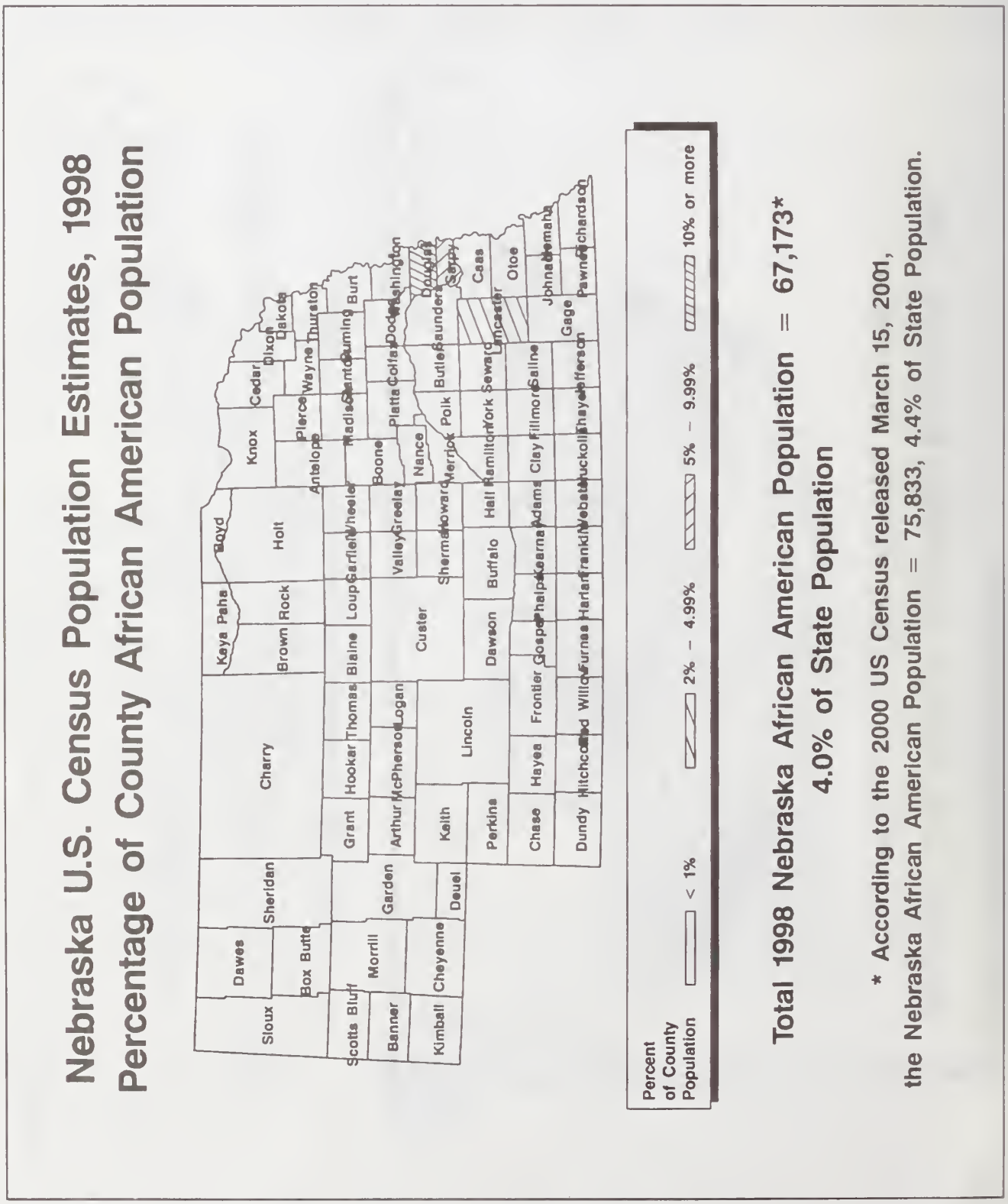
The majority of the state's racial/ethnic minority population (71 percent) live in the three largest counties: Douglas, Lancaster, and Sarpy (Figure 2).

Figure 2



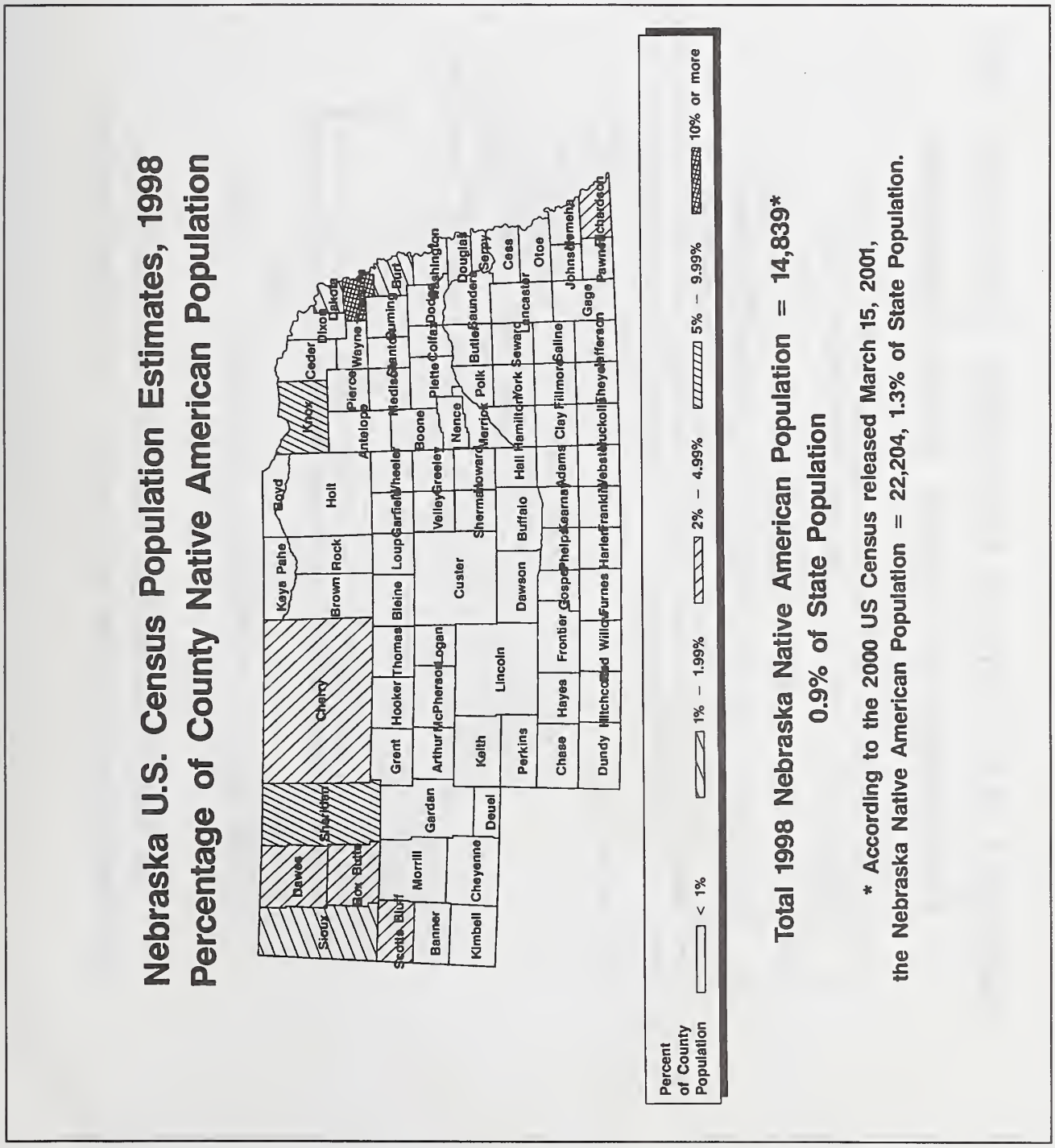
Only about four percent of the state's African American population live outside these three counties, with 86 percent of the total residing in the Omaha metropolitan area *(Figure 3)*.

(Figure 3)



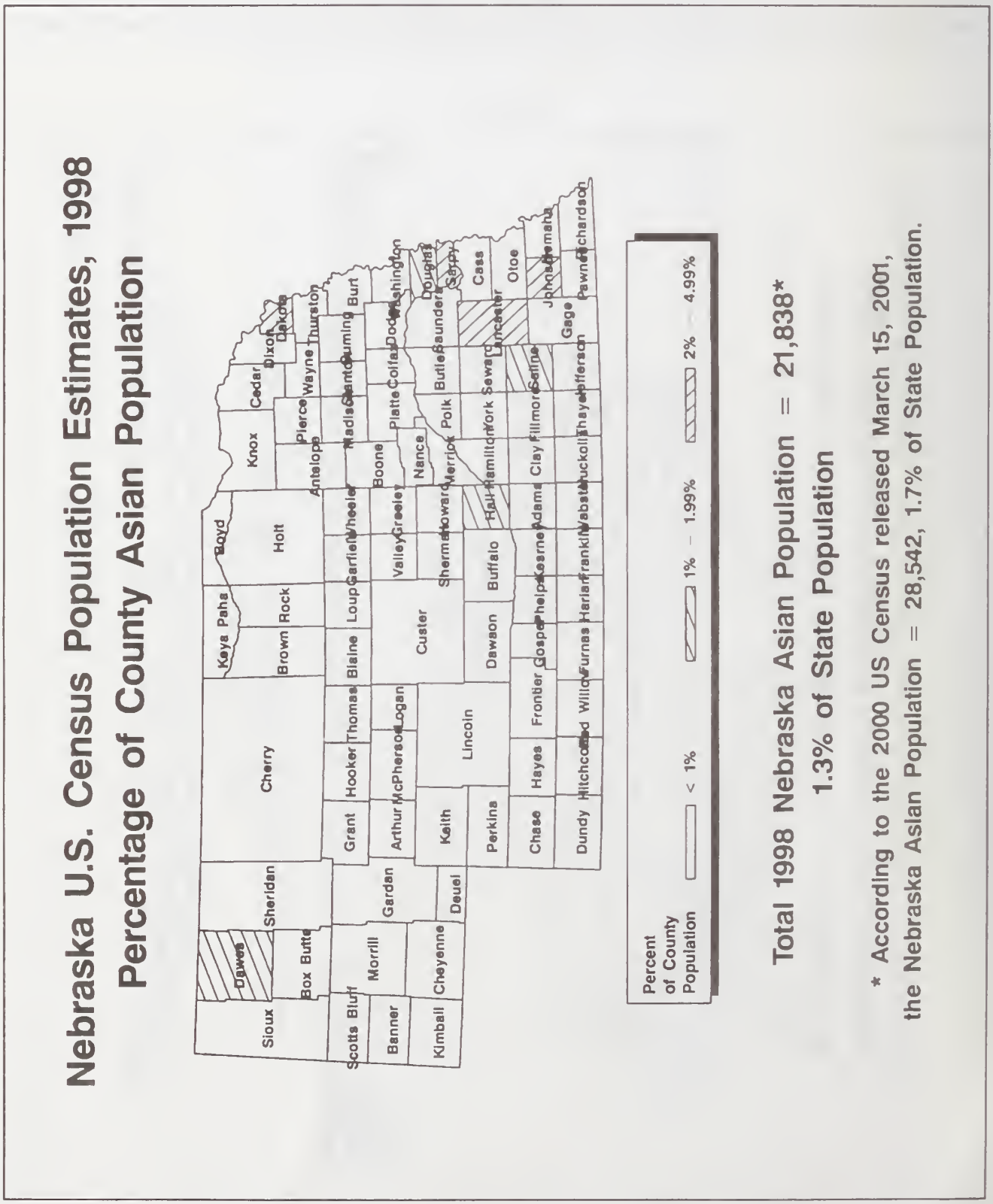
Though many of Nebraska's Native Americans live on reservations, the majority of them do not *(Figure 4)*. The urban areas of Omaha and Lincoln accounted for more than 37 percent of the state's Native American population, although they make up only a small proportion of these counties' total populations. A sizeable group also exists in the northwestern part of Nebraska adjoining the Pine Ridge Reservation in South Dakota. Among the state's reservations, the Winnebago and Omaha reservations in Thurston County account for 22 percent of Nebraska's Native American population. An additional 3 percent reside at the Santee Indian Reservation in Knox County. The Iowa and the Sac and Fox Indian Reservations on the Nebraska-Kansas border account for about 1 percent of Nebraska's Native American's total population. (Figure 4).

Figure 4



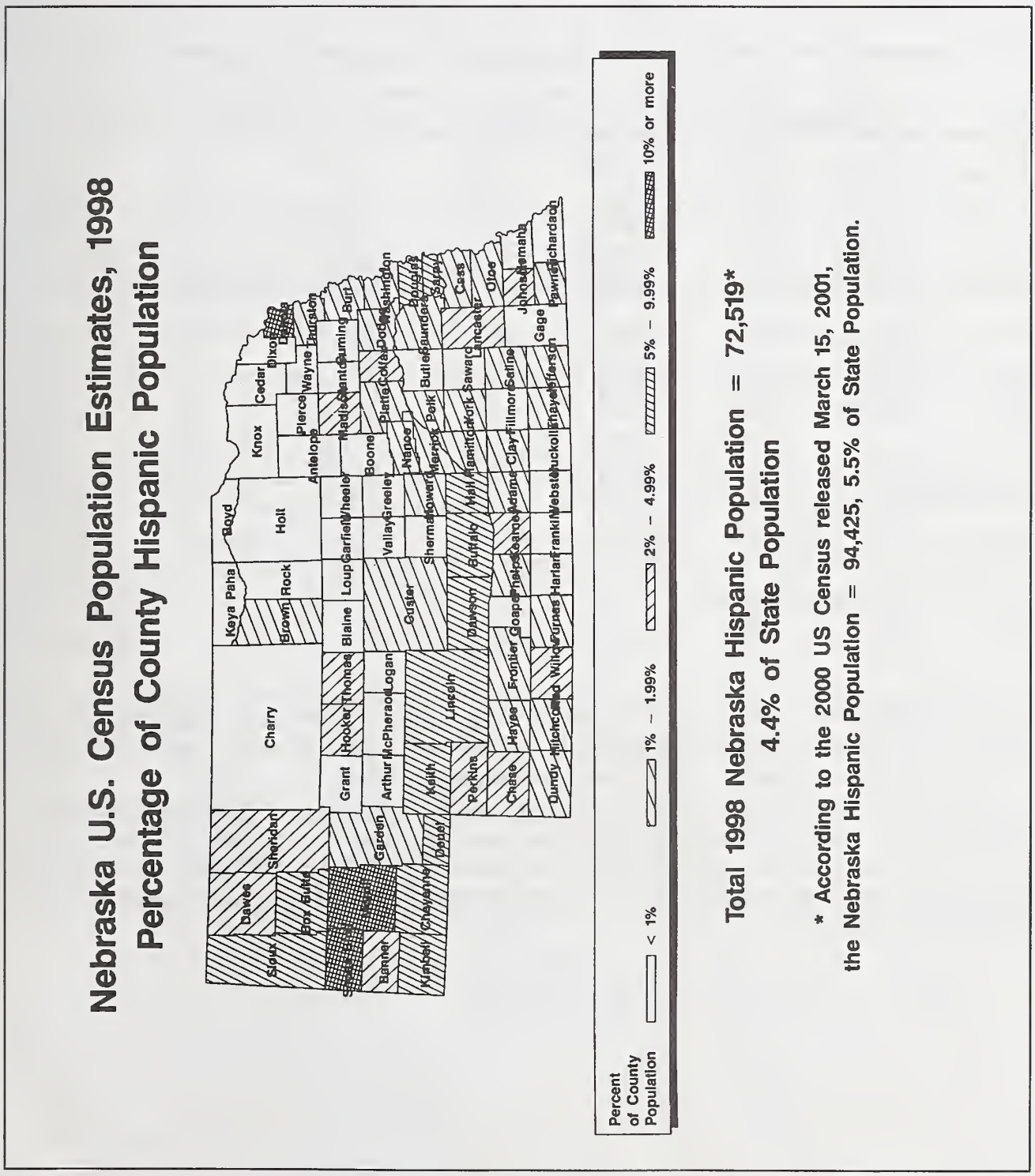
About three-fourths of Asian Americans/Pacific Islanders (76 percent) *(Figure 5)*, as well as about half the Hispanic American Population (53 percent) *(Figure 6)*, also live in Nebraska's three metropolitan counties.

Figure 5



With the availability of employment for migrant workers, the Hispanic population in the western part of Nebraska has increased substantially. According to the 1998 U.S. Census estimates, 12 percent of the Hispanic American population resides in Scotts Bluff County. However, because meat-packing plants in several Nebraska counties continue to attract large number of Hispanic American workers and their families from outside the state, this proportion is probably changing. Dawson, Colfax, Cuming, Dakota, Hall, Madison, and Platte counties have also experienced increases in their Hispanic American populations because of this industry.

Figure 6



AGE DISTRIBUTION

Racial or ethnic minority residents are more likely than white Nebraskans to be under age 25 *(Table 5A)*. About one-half of all African Americans, Native Americans, Asian Americans, and Hispanic Americans in

Table 5a
Distribution of Nebraska's Population by Age
and Racial/Ethnic Group (1998)

Age	% of Total Population	% of White Population	% of African American Population	% of Native American Population	% of Asian American Population	% of Hispanic American Population
< 1 Year	1.4	1.3	1.7	2.7	2.5	2.3
1 - 13	18.9	18.4	25.0	30.8	27.3	26.9
14 - 24	16.6	16.3	20.3	21.9	20.7	23.7
Under 25	36.8	36.0	47.0	55.4	50.5	53.0
25 - 44	28.6	28.4	32.7	27.2	32.4	30.9
45 - 64	20.8	21.3	15.4	11.9	13.7	9.7
65 - 74	6.9	7.1	4.0	2.4	2.2	2.8
75 +	6.9	7.4	2.4	2.0	1.1	2.1
45 and Older	34.6	35.8	21.8	16.3	17.1	14.7
All Ages (#)	1,662,719	1,558,869	67,173	14,839	21,838	72,519

SOURCE: U.S. Census Estimates, 1998.

Nebraska fall into the under age 25 bracket compared to 36.0 percent of white Nebraskans in this age group in 1998. Only one-fifth or less of all racial/ethnic minority residents in the state were aged 45 or older, while more than one-third of white Nebraskans (35.8 percent) fell into this age category.

According to the 1998 U.S. Census estimates, children under age 18 made up 26.8 percent of Nebraska's population (a total of 445,642 children) *(Table 5B)*. Among the white population of the state, children under age 18 accounted for about one-fourth of all residents (26.1 percent). Among racial and ethnic minorities, the proportion of children in the population was larger, ranging from 35.0 percent for African Americans to 43.2 percent for Native Americans.

Table 5b
Distribution of Nebraska's Population by Age
Children vs. Adults by Race and Ethnic Group
1998

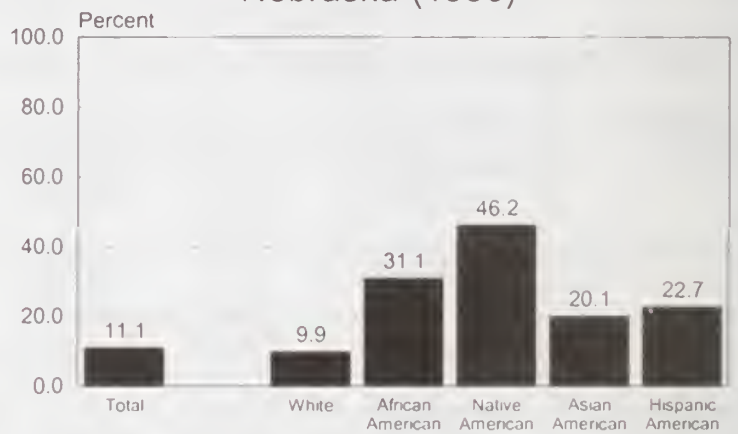
AGE / RACIAL OR ETHNIC GROUP	TOTAL		MALE		FEMALE	
	#	%	#	%	#	%
Total Population	1,662,719		813,421		849,298	
0 - 17 Years	445,642	26.8	228,858	28.1	216,784	25.5
18 Years +	1,217,077	73.2	584,563	71.9	632,514	74.5
White	1,558,869		763,020		795,849	
0 - 17 Years	407,629	26.1	209,650	27.5	197,979	24.9
18 Years +	1,151,240	73.9	553,370	72.5	597,870	75.1
African American	67,173		32,512		34,661	
0 - 17 Years	23,477	35.0	11,791	36.3	11,686	33.7
18 Years +	43,696	65.0	20,721	63.7	22,975	66.3
Native American	14,839		7,258		7,581	
0 - 17 Years	6,412	43.2	3,260	44.9	3,152	41.6
18 Years +	8,427	56.8	3,998	55.1	4,429	58.4
Asian American	21,838		10,631		11,207	
0 - 17 Years	8,124	37.2	4,157	39.1	3,967	35.4
18 Years +	13,714	62.8	6,474	60.9	7,240	64.6
Hispanic American	72,519		37,261		35,258	
0 - 17 Years	28,904	39.9	14,773	39.6	14,131	40.1
18 Years +	43,615	60.1	22,488	60.4	21,127	59.9

SOURCE: U.S. Census Estimates, 1998.

Socioeconomic Status

Racial and ethnic minority populations in the United States frequently have higher levels of poverty than the population as a whole. National data indicate that people with lower incomes have more health problems and engage in more health-related risk behaviors. As an example, the rate of smoking is higher among people with low incomes and education. Compared to the population in general, people living in poverty often are less likely to consume a low-fat diet or get adequate amounts of exercise.

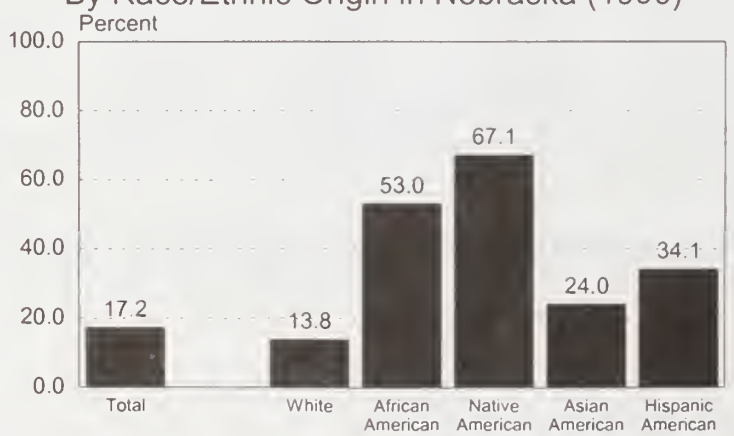
Figure 7
Poverty Rates* by Race/Ethnic Origin
Nebraska (1990)



*% with incomes below 100% of federally-designated poverty level
SOURCE: U.S. Census, 1990

Nebraska's racial and ethnic minority groups are disproportionately represented in the lower income categories. According to the 1990 U.S. Census, the proportion of minority residents living in households with incomes below 100 percent of the federally-designated poverty level was 20.1 percent for Asian Americans, 22.7 percent for Hispanics, 31.1 percent for African Americans, and 46.2 percent for Native Americans living in the state *(Figure 7)*. In comparison, only 9.9 percent of whites and 11.1 percent of all Nebraskans lived in poverty.

Figure 8
Poverty Rates* -- Children Under Age 5
By Race/Ethnic Origin in Nebraska (1990)



*% with incomes below 100% of federally-designated poverty level.

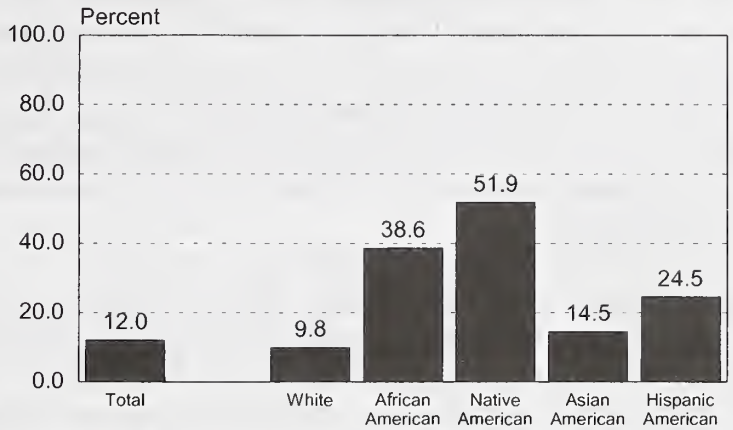
SOURCE: U.S. Census, 1990.

Differences in poverty rates between whites and racial/ethnic minority residents of Nebraska were particularly striking for households with children. For children under 5 years of age, the proportion living in households with incomes below 100 percent of poverty in 1990 ranged from 24.0 percent for Asian Americans to 67.1 percent for Native Americans, compared to 13.8 percent of white children this age *(Figure 8)*. Among older

children aged 5 to 17, approximately one in ten white children (9.8 percent) live in poverty. Rates for minority children in this age group ranged from 14.5 percent for Asian Americans, 24.5 percent for Hispanic Americans, and 38.6 percent for African Americans to 51.9 percent for Native Americans *(Figure 9)*.

Figure 9

Poverty Rates*--Children Aged 5-17 Years
By Race/Ethnic Origin in Nebraska (1990)



*% with incomes below 100% of federally-designated poverty level.

SOURCE: U.S. Census, 1990.

Access to Health Care

It is difficult to separate the effects of low-level socioeconomic status from those resulting from poor access to health care, since lack of health insurance and inability to pay for health services are closely linked to poverty. For people with limited financial resources, health care is accorded a low priority on the domestic scale of preference because the basic necessities of life such as food and shelter are the more immediate needs for survival. At the same time, since their energies and resources are focused on present needs, consideration of long-term outcomes of preventive health care and early diagnosis of diseases often is non-existent. General feelings of hopelessness, powerlessness and low level of self-esteem also make it more difficult for the poor to seek health care services.

Language and cultural differences between health care providers and recipients from different ethnic backgrounds often make communication difficult. The communication gaps may also prevent them from receiving care that is appropriate to their needs when they do visit a health care provider. These difficulties are particularly acute for persons who do not speak English as their primary language. In general, low-income and racial/ethnic minority families are affected more severely than other segments of the population by language and cultural barriers, contributing to the excess morbidity and mortality these groups already experience. Availability of health care professionals who are culturally competent and have needed linguistic skills can greatly enhance the effectiveness of the health care that these patients receive.

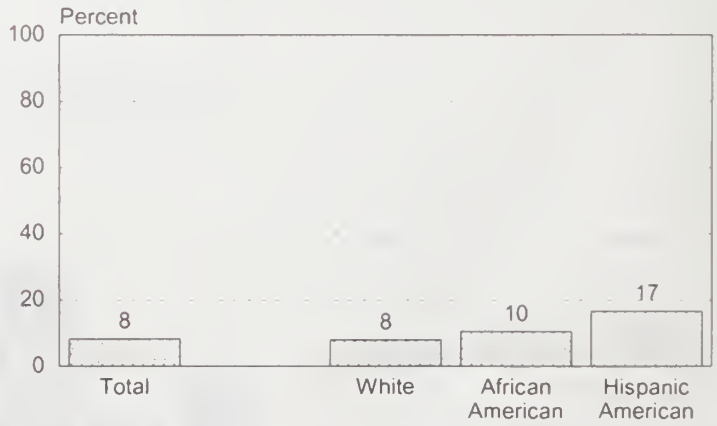
In order to improve the health of racial and ethnic minorities and other underserved populations in Nebraska, it will be imperative to improve access to primary care and increase the use of preventive services. Preventive services include procedures such as immunizations, screening for early detection of diseases (such as cancer and diabetes) or risk factors (such as elevated blood cholesterol levels), and patient counseling.

HEALTH INSURANCE

According to the 1994-1998 Nebraska Behavioral Risk Factor Surveillance System (BRFSS), 8 percent of all Nebraska adults aged 18 and older reported having no health care plan or insurance *(Figure 10)*.

Figure 10

Percent of Nebraskans with No Health Insurance
Adults Aged 18 + (1994-1998)



SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

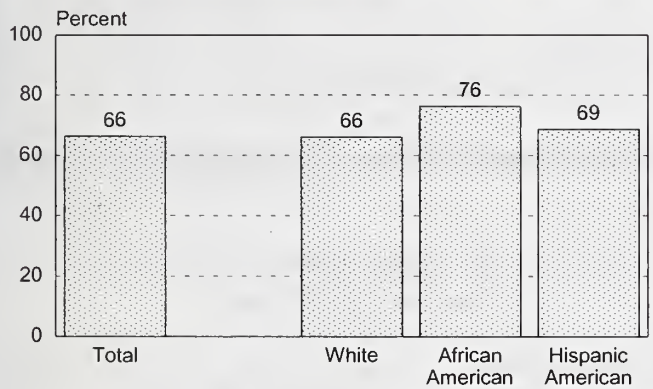
This survey found that 10 percent of African American adults were without health insurance, while 17 percent of Hispanic Nebraskans had no health insurance in 1994-1998. Asian and Native American prevalence estimates were not calculated due to an insufficient number of respondents. Thus, the proportion of the adult population who are uninsured is somewhat higher for racial/ethnic minorities in Nebraska compared to the population in general.

Although most Nebraska residents and workers have some kind of health care plan, not everyone with health insurance carries adequate coverage. Inadequate health insurance may also serve as a barrier to receipt of needed health care, particularly for persons with low to moderate incomes.

UTILIZATION OF PREVENTATIVE HEALTH CARE SERVICES

The 1994-1998 Nebraska BRFSS found that African Americans (76 percent) and Hispanic Americans (69 percent) were somewhat more likely to have had a routine checkup in the past year than white Nebraskans (66 percent) (*Figure 11).* Data are unavailable for Native Americans and Asian Americans. Rates for other types of preventive health care were generally about equal for whites and racial and ethnic minorities for whom data are available, although some differences were apparent. Detailed findings for several types of health screening are presented later in this report with the related disease category; for example, prevalence of blood pressure checks is discussed in the cardiovascular disease section.

Figure 11
Percent of Nebraskans Who Had Routine Checkup In Past 12 Months--Adults Aged 18 + (1994-1998)



SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

COULD NOT SEE DOCTOR FOR NEEDED CARE

The proportion of adult Nebraskans who had at some time in the past 12 months been unable to see a doctor because of the cost of care was the same for whites and for African Americans (7 percent) in 1994-1998 *(Figure 12).* Among Hispanics, a much greater proportion (17 percent) said they had foregone a needed physician visit during the last year because of cost.

SHORTAGE OF MINORITY HEALTH CARE PROVIDERS

There is currently a shortage of physicians who are members of racial and ethnic minority groups. Less than four percent of all U.S. physicians are African Americans, although they comprise nearly twelve percent of the population. Persons of Hispanic origin and Native Americans are also underrepresented in the American physician population.

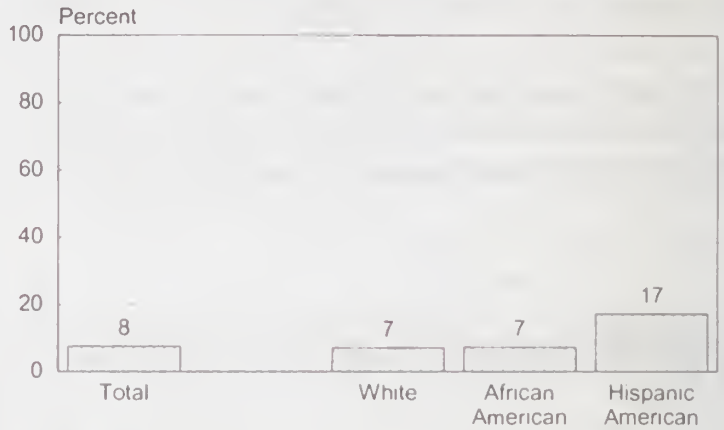
According to the Health Professions Tracking Center at the University of Nebraska Medical Center, in 1999 only about one percent of Nebraska physicians are African American, although this group makes up 4.0 percent of the population of the state *(Figure 13)*.

The Tracking Center had identified only eight Native American physicians practicing in Nebraska (0.3 percent of all physicians in the state). This minority group comprises 0.9 percent of the population.

Persons of Hispanic origin make up 4.4 percent of the state's population, and are the fastest growing population, but account for only 1.2 percent of Nebraska physicians. In actuality, this represents a drop of .4 percentage points in the proportion of physicians in the state who are Hispanic when compared with 1994.

Figure 12

Percent of Nebraskans* Unable to See Doctor Due to Cost in Past 12 Months (1994-1998)

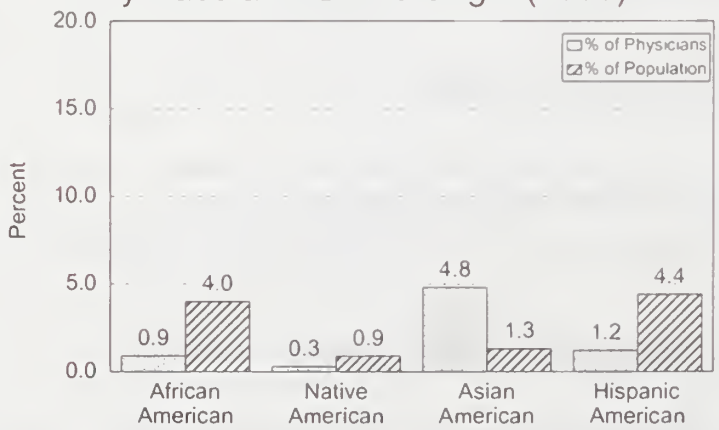


*Aged 18 and older.
SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

On the other hand, Asian Americans are over represented in the physician population. This group makes up only 1.3 percent of the population of the state, but accounts for 4.8 percent of physicians.

Figure 13

Nebraska Primary Care* Physicians By Race and Ethnic Origin (1999)



*Physician specialties included in "primary care": General/Family Practice, Internal Medicine, Pediatrics, Obstetrics/Gynecology, General Surgery, and Psychiatry
SOURCE: Health Professions Tracking Center, UNM

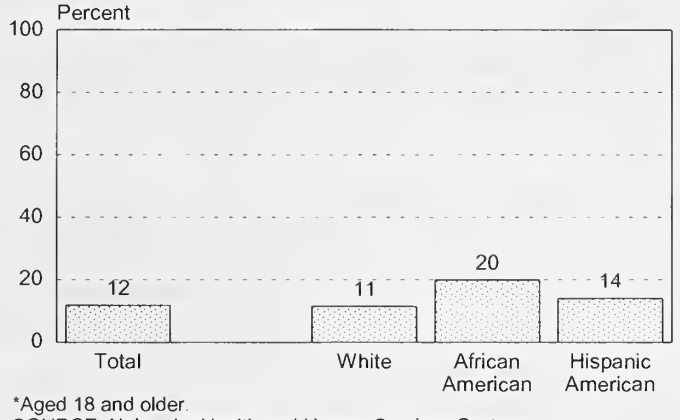
Increasing the proportion of racial and ethnic minorities in medicine and dentistry has been shown to be an effective way to improve health care for the underserved. Racial/ethnic minority physicians are more likely than white physicians to choose to go into primary care. They are also nearly twice as likely as white physicians to practice in underserved rural and urban areas. Availability of providers who are racial or ethnic minorities themselves also tends to eliminate some of the language and cultural barriers limiting access to care.

General Health Status of Racial/Ethnic Minority Nebraskans

According to the 1994-1998 Nebraska Behavioral Risk Factor Surveillance System, adult Nebraskans who are African American or Hispanic American are more likely than Nebraskans in general to consider their health "fair" or "poor" *(Figure 14)*. Eleven percent of white Nebraskans described their health as only fair or poor. In comparison, fourteen percent of Hispanic Americans and 20 percent of African Americans in the state rated their health this way.

Figure 14

Percent of Nebraskans* Who Consider Their Health "Fair" or "Poor" (1994-1998)



*Aged 18 and older.

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

Mortality and Disease Incidence Among Racial/Ethnic Minority Groups in Nebraska

LIFE EXPECTANCY

According to the National Vital Statistics Report of June 30, 1999, published by the U.S. Department of Health and Human Services, "Life expectancy at birth represents the average number of years that a group of infants (people) would live if the infants (people) were to experience throughout life the age-specific death rates present at birth."

Overall life expectancy in Nebraska has been continuously increasing over the last 30 years *(Table 6A)*. For instance, an infant born in 1996-1998 could expect to live 77.6 years, compared to 72.7 years for one born in 1969-1971.

Table 6A
Life Expectancy for State of Nebraska (For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
1996-1998	77.61	74.73	80.39
1994-1996	77.35	74.30	80.28
1989-1991	77.04	73.65	80.32
1984-1986	76.41	72.77	80.04
1979-1981	75.70	71.84	79.62
1974-1976	74.27	70.56	78.13
1969-1971	72.68	68.89	76.75
1959-1961	Not Available	68.87	75.60

SOURCE: Nebraska Department of Health and Human Services System, Vital Statistics.

In Nebraska, the average life expectancy in the three years, 1996-1998, was 77.9 years for whites, 70.1 years for African Americans, and 68.2 years for Native Americans *(Tables 6B, 6C, and 6D)*. Life expectancy data for Hispanic Americans and Asian Americans are unavailable currently.

Life expectancy has increased for both males and females, although female life expectancy (80.4 years) is several years longer than that for males (74.7 years).

Increase in average life expectancy for whites and African Americans was about the same, when changes were compared for the same gender. For males, the average life expectancy increased by 8.2 years among African Americans *(Table 6C)* and by 8.9 for whites *(Table 6B)* between 1959-1961 and the current three-year period.

Table 6B
Life Expectancy for White Nebraskans
(For selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
1996-1998	77.94	75.07	80.70
1994-1996	77.67	74.64	80.56
1989-1991	77.33	73.94	80.62
1984-1986	76.61	72.97	80.25
1979-1981	75.72	72.02	79.83
1974-1976	74.53	70.84	78.37
1969-1971	73.03	69.20	77.15
1959-1961	Not Available	66.20	74.20

SOURCE: Nebraska Health and Human Services System, Vital Statistics

Table 6C
Life Expectancy African American
(For Selected years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
1996-1998	70.13	67.39	72.76
1994-1996	70.03	66.44	73.57
1989-1991	70.75	67.11	74.29
1984-1986	70.12	66.68	73.63
1979-1981	68.59	64.99	72.14
1974-1976	67.13	62.66	71.84
1969-1971	64.80	61.13	68.65
1959-1961	Not Available	59.20	66.10

SOURCE: Nebraska Health and Human Services System, Vital Statistics

For females, less improvement was noted during this time, with an increase of 6.5 years recorded for white women and 6.7 years for African American women.

However, it is important to realize that, though comparable increases in life expectancy occurred, the average number of years an African American baby born in Nebraska could expect to live is still considerably fewer than the number of years a white infant could expect to live.

Life expectancy data is available for Native Americans from 1979 to the present *(Table 6D)*.

Table 6D
Life Expectancy Native Americans
(For Selected Years)

YEARS	TOTAL/YRS	MALES/YRS	FEMALES/YRS
1996-1998	68.18	64.21	72.32
1994-1996	67.69	62.69	73.26
1989-1991	66.66	62.96	70.43
1984-1986	67.45	63.56	72.00
1979-1981	63.79	59.79	67.89

SOURCE: Nebraska Health and Human Services System, Vital Statistics

For Native Americans overall, life expectancy was 68.2 years, lower than the average for whites (77.9) or African Americans (70.1) in the state. As with the other racial groups, females (72.3) recorded greater life expectancy than males (64.2).

Between 1979-1981 and 1996-1998, life expectancy for Native Americans rose by 4.4 years compared to 2.2 years for whites and 1.5 years for African Americans living in Nebraska.

YEARS OF POTENTIAL LIFE LOST

Years of potential life lost (YPLL) is a measure of premature death. As noted earlier in the methodology section of this report, the younger the person at the time of death, the greater the number of years of potential life lost.

According to the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC), for the United States as a whole, the age-adjusted YPLL for all races combined declined from 8,384 per 100,000 population in 1990-1992 to slightly less than 8,000 in 1995-1997 (based on 75 productive years of life).

For African Americans nationwide, the current rate (14,250 YPLL per 100,000) is down from 15,468 in 1990-1992. Still, this rate is nearly double the rate for the total U.S. population, reflecting higher mortality for several major causes of death that affect this population (e.g., heart disease, cancer, cerebrovascular diseases, infant mortality, unintentional injury, homicide and HIV/AIDS).

Among Native Americans, the rate of years of potential life lost (9,750) is also much higher than the national average, due in large part to higher rates for heart disease, cancer, cirrhosis of the liver, infant mortality, unintentional injury, homicide, and suicide. However, the latest YPLL rate represents a significant reduction from 1990-1992 when 11,875 potential years of life were lost.

For Hispanic Americans, the rate (6,250) is lower than rates for whites, African Americans, and Native Americans nationwide. The YPLL rate for Hispanic Americans also decreased from the 1990-1992 rate of 7,114.

In Nebraska, the age-adjusted YPLL rate for 1994-1998 for all races combined was 6,720 years per 100,000 population, indicating a decrease of 296 years per 100,000 when compared to the 1989-1993 YPLL rate (7,016). The current Nebraska rate is also lower than the overall U.S. rate.

African Americans in Nebraska experienced a YPLL rate (13,396) that was more than twice as high as the white rate in 1994-1998 *(Table 7)*. This rate has shown only a slight decrease (-0.9 percent) from the previous five-year period. However, the Nebraska rate for African Americans was 6 percent lower than the U.S. rate for this population group.

Table 7
Years of Potential Life Lost – All Causes
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Population

	1989-1993			1994-1998		
	YPLL	**Age-Adjusted Rate/ 100,000**	**Minority-to White Ratio***	**YPLL**	**Age-Adjusted Rate/ 100,000**	**Minority - to White Ratio***
All Causes White	486,542	6,698		481,172	6,414	
African American	37,359	13,523	2.02	39,484	13,396	2.09
Native American	9,850	17,392	2.60	9,861	17,233	2.67
Asian American	2,297	3,554	0.53	3,059	3,504	0.55
Hispanic American	11,812	5,820	0.87	21,277	6,514	1.02

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Vital Statistics Data, 1989-1993 and 1994-1998. Nebraska Department of Health and Human Services.

The highest rate of years of potential life lost for any racial or ethnic group in Nebraska was recorded for Native Americans in 1994-1998 (17,233 YPLL). Although this represents a slight decrease from 17,392 in 1989-1993, the current rate is 2.7 times the rate for whites in the state. The Nebraska rate is also 77 percent higher than the YPLL reported for Native Americans nationwide.

The number of years of potential life lost per 100,000 population for Hispanic Nebraskans (6,514) in 1994-1998 was only slightly higher than the corresponding rate for white residents of the state (6,414). However, the YPLL rate for this group has increased by 12 percent over the previous five-year period. Compared to national rate for Hispanic Americans, the Nebraska rate is slightly higher (+ 4 percent).

The 1994-1998 YPLL rate for Asian Americans in the state (3,504) is little more than one-half the white rate and represents a slight decrease from the 1989-1993 rate of 3,554.

LEADING CAUSES OF DEATH

Table 8 lists the leading causes of death in Nebraska among whites, African Americans, Native Americans, Asian Americans and Hispanic Americans.

Table 8
Leading Causes of Death Among Nebraskans
(Based on Number of Deaths in 1994-1998)

White (73,080 Deaths)	African American (2,352 Deaths)	Native American (481 Deaths)	Asian American (147 Deaths)	Hispanic American (807 Deaths)
Heart Disease	Heart Disease	Heart Disease	Cancer	Heart Disease
Cancer	Cancer	Cancer	Heart Disease	Cancer
Stroke	Stroke	Unintentional Injuries	Stroke	Unintentional Injuries
Unintentional Injuries	Homicide	Cirrhosis	Unintentional Injuries	Diabetes
Pneumonia	Diabetes	Diabetes	Birth Defects	Stroke
Chronic Lung Disease	Unintentional Injuries	Stroke	Pneumonia	Homicide
Diabetes	Pneumonia	Pneumonia	*	Birth Defects
Atherosclerosis	Chronic Lung Disease	Nephritis/Nephrosis	*	Suicide
Alzheimer's Disease	AIDS	Chronic Lung Disease	*	Cirrhosis
Suicide	Nephritis/Nephrosis	Suicide	*	Nephritis/Nephrosis
Nephritis/Nephrosis	Asthma	Homicide	*	Pneumonia
Aortic Aneurysm	Septicemia	Alcoholism	*	Chronic Lung Disease
Emphysema	Suicide	*	*	AIDS
Septicemia	Cirrhosis	*	*	Premature Birth
Cirrhosis	Premature Birth	*	*	Atherosclerosis

*Fewer than five deaths over the five-year period 1994-1998.
SOURCE: Nebraska HHSS, Vital Statistics.

In Nebraska, heart disease and cancer were the two leading causes of death in 1994-1998 among the five major ethnic and racial populations in the state. However, while heart disease was the leading cause of death among whites, African Americans, Native Americans, and Hispanic Americans, cancer was the leading cause among Asian Americans followed by heart disease.

The percentage of all deaths attributed to these diseases varied with race and ethnic origin, ranging from highs of 54.5 percent for whites and 47.2 percent for African Americans, to a low of 36.7 percent for Hispanic Nebraskans. About four of every ten deaths among Native Americans (42.8 percent) and Asian Americans (41.5) were caused by heart disease or cancer during the five-year period 1994-1998.

Cancer, the second leading cause of death in Nebraska, had a significant impact on the white population, as it caused 21.7 percent of all deaths of white Nebraskans. Cancer was the cause for 20.8 percent of African American deaths. For Native Americans and Hispanic Americans, a smaller proportion of deaths were attributable to cancer (14.3 percent and 16.1 percent).

Stroke (cerebrovascular disease) was also a frequent cause of death, ranking third among whites (7.5 percent of all deaths for this group), African Americans (7.1 percent) and Asian Americans (8.2 percent). Strokes were the fifth leading cause of death for Hispanic Americans and sixth among causes of death for Native Americans.

Unintentional injuries were the third leading cause of death among Native Americans and Hispanic Americans in Nebraska, accounting for 10.6 percent and 13.8 percent of all deaths in these population groups. These injuries ranked fourth as a cause of death among Asian Americans and white Nebraskans, but ranked sixth among African Americans.

Pneumonia ranked fifth as a cause of death among white residents and sixth among Asian Americans, but was a little less frequently the cause of death among African Americans and Native Americans (ranking seventh). Among Hispanic Nebraskans, pneumonia ranked eleventh.

Although these five causes of death generally accounted for a large proportion of all deaths for each of the racial and ethnic groups studied here, there were substantial differences among these population groups for other leading causes of death. For example, chronic lung disease and atherosclerosis were far more common causes of death for white Nebraskans than for other races.

The proportion of deaths attributed to diabetes was generally greater among racial and ethnic minority residents than among whites in Nebraska. Diabetes ranked fourth as a cause of death for Hispanic Americans and fifth for African Americans and Native Americans, compared to seventh for white Nebraskans.

Homicides also ranked higher as a leading cause of death among African Americans (ranking fourth) and Hispanic Americans (sixth) than among Native Americans (eleventh). For Asian Americans and white residents, homicides did not appear in the top fifteen causes of death.

Cirrhosis of the liver ranked fourth as a cause of death among Native Americans in the state, compared to ninth for Hispanics. Cirrhosis was less frequently a cause of death for African Americans and for whites, ranking fourteenth and fifteenth, respectively.

AIDS appeared among the top 15 causes of death in Nebraska in 1994-1998 for African Americans (ranking ninth) and for Hispanic Americans (thirteenth).

Birth defects ranked fifth among Asian Americans as a cause of death and seventh among Hispanics, but did not rank in the top 15 causes for other racial and ethnic groups in the state.

Health Issues

Cardiovascular Diseases

OVERVIEW OF HEALTH IMPACT

Cardiovascular diseases (CVD) include heart disease, stroke, and atherosclerosis. Nearly 65 million people in the United States, about one in four Americans, have one or more forms of cardiovascular disease.

Over the past 20 years, the death rate for cardiovascular disease has declined by 39 percent in the United States. Dramatic decreases in mortality due to coronary heart disease and stroke are primarily responsible for this overall reduction. Changes in lifestyle and risk factor reduction, along with technological and medical advances, contributed to the decline. However, cardiovascular disease is still the leading cause of death, killing nearly as many Americans as all other diseases combined.

About two-thirds of all heart-attack patients do not make a complete recovery and the majority of stroke survivors are left with some degree of impairment. Thus, cardiovascular disease is also the leading cause of limitation in physical activity.

CURRENT RATES

DEATHS DUE TO CARDIOVASCULAR DISEASES

In 1997, more than one million people nationwide died from some form of cardiovascular disease. In Nebraska cardiovascular disease (including heart disease, stroke, and atherosclerosis) was the cause of 6,092 deaths in 1998 or about 40 percent of the total number of deaths. This total was 4.3 percent less than in 1994. In 1998, heart disease was the cause of 4,734 deaths (31.2 percent of all deaths) in Nebraska, according to Nebraska's 1998 Vital Statistics Report.

These forms of cardiovascular disease accounted for an average of 241 deaths annually over the five-year period 1994-1998 among racial and ethnic minorities living in the state. These deaths comprised 32 percent of all minority deaths, a smaller proportion than the 42 percent recorded for whites.

DEATHS DUE TO HEART DISEASE

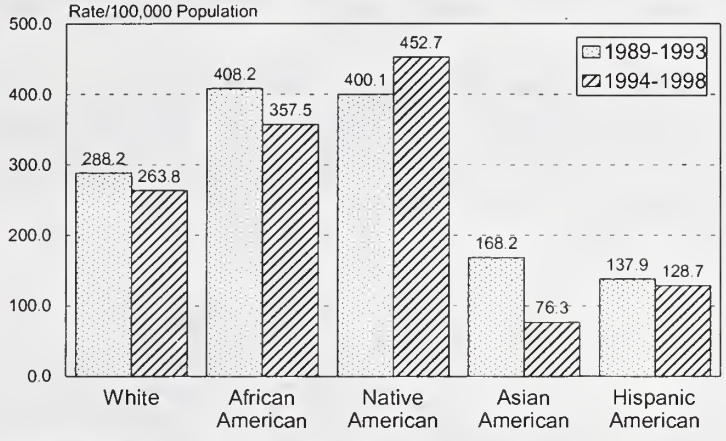
Heart disease (all forms) continues to be the leading cause of death nationwide and in Nebraska. Among the racial and ethnic minority population in the state, heart disease accounted for an average of 189 deaths per year between 1994 and 1998. These deaths amounted to 25 percent of all deaths among minorities (vs. 33 percent for whites). Except for Asian Americans, heart disease ranked first as a cause of death for all racial and ethnic minorities during the 1994-1998 period.

Heart disease mortality rates decreased for all racial and ethnic groups except for Native Americans in 1994-1998 as opposed to the previous five-year period. However, the decline was small for Hispanic Americans. For Native Americans, that rate increased significantly *(Figure 15)*.

Age-adjusted mortality data for heart disease show substantial differences between racial and ethnic groups in the state *(Table 9)*. Rates of death due to heart disease for both African Americans (357.5 deaths per 100,000 population) and Native Americans (452.7) in Nebraska were considerably higher than the rate for white residents (263.8). In fact, Native Americans were 1.7 times as likely as white residents to die from heart disease and this relative risk ratio increased. For African Americans, the death rate was 1.4 times the rate for whites.

Figure 15

Heart Disease Mortality Rates* By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

These results differ from the national rates in that, in 1998, African Americans in the United States were the only racial/ethnic minority group that experienced higher mortality rates from heart disease than whites. Native Americans nationwide showed rates that are lower than the rates for white Americans.

Persons of Hispanic origin (128.7) in Nebraska and Asian Americans (76.3) had lower rates of death from this cause than did whites (263.8), both in Nebraska and nationally.

Table 9
Cardiovascular Disease
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minonty Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Heart Disease								
White	288.2				263.8			
African American	408.2	1.4	1.2	1.6	357.5	1.4	1.2	1.5
Native American	400.1	1.4	1.4	1.4	452.7	1.7	1.8	1.7
Asian American	168.2	0.6	0.6	0.6	76.3	0.3	0.3	0.3
Hispanic American	137.9	0.5	0.4	0.5	128.7	0.5	0.5	0.5
Stroke								
White	60.4				59.2			
African American	69.9	1.2	1.4	1.0	99.6	1.7	1.7	1.6
Native American	72.6	1.2	1.9	0.8	75.3	1.3	2.1	0.9
Asian American	29.7	0.5	**	**	41.5	0.7	0.7	0.8
Hispanic American	25.5	0.4	0.4	0.5	28.2	0.5	0.6	0.3

*Age-adjusted to 2000.
**Fewer than five deaths during the five-year period.
SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO HEART DISEASE

For the five-year period (1994-1998), an average of 2,261.3 years of potential life were lost annually to heart disease among racial and ethnic minority residents of Nebraska *(Table 10)*. The number of years lost per person from this cause is 2.2 times as high for African Americans and 3.4 times as high for Native Americans as for whites.

Although heart disease is considered a condition of older adults, national studies report that the prevalence of heart disease among African Americans and Native Americans under age 45 is much higher than the rate for the non-minority populations. Death rates for these younger age groups are also higher than the rates for whites, resulting in a greater number of years of potential life lost.

Table 10
Years of Potential Life Lost – Heart Disease and Stroke
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Heart Disease						
White	89,791	1,244.2		84,490	1,115.4	
African American	4,948	2,388.3	1.9	5,780	2,441.2	2.2
Native American	1,061	2,730.9	2.2	1,541	3,748.1	3.4
Asian American	325	663.5	0.5	268	424.6	0.4
Hispanic American	1,279	880.5	0.7	1,456	734.6	0.7
Average/Year (Minorities)	1,903.3			2,261.3		
Stroke						
White	12,927	177.5		13,763	181.0	
African American	1,242	593.6	3.3	1,431	580.9	3.2
Native American	115	347.4	2.0	217	519.2	2.9
Asian American	155	264.9	1.5	134	236.7	1.3
Hispanic American	79	77.5	0.4	456	204.2	1.1
Average/Year (Minorities)	397.8			559.5		

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

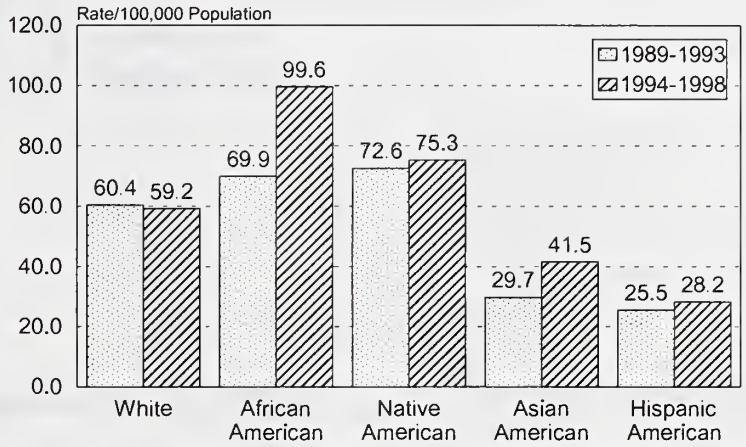
DEATHS DUE TO CEREBROVASCULAR DISEASE (STROKE)

Strokes are the third leading cause of death in Nebraska and in the United States. Stroke (or cerebrovascular disease) was the cause of 1,153 deaths in Nebraska in 1998.

Among the racial/ethnic minority population of the state, strokes resulted in an average of 47 deaths annually over the five-year period of 1994-1998. These deaths comprise about 6.3 percent of all minority deaths, compared to 7.5 percent of all deaths among whites.

Figure 16

Stroke Mortality Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

Current rates for African Americans (99.6 deaths per 100,000) between 1994-1998 indicated significant increase when compared to 1989-1993 (69.9). Native Americans witnessed a slight increase during this time period on stroke mortality rate as did Hispanic Americans *(Figure 16)*. Rates for Asian Americans also registered an upward trend in 1994-1998, compared to the previous five years.

Nationwide, mortality rates for stroke were almost equal between whites and Asian Americans, and slightly lower for Hispanic Americans and Native Americans. The stroke death rate for African Americans in the United States was about double the rate for other racial and ethnic groups.

During the most recent five-year period (1994-1998) in Nebraska, the death rate due to stroke was 1.7 times as high for African Americans (99.6) as the rate for whites (59.2) (Table 8).

In contrast to national rates, the Nebraska stroke mortality rate for Native Americans (75.3) is 1.3 times the white rate. For this population group, stroke mortality rates for men over the last ten years have been about twice as high as the rate for white men, while rates have been about equal for Native American and white women.

Stroke mortality rates for Asian Americans (41.5) increased in the latest five-year period, so that now Asian Americans are 0.7 times as likely as whites to die from stroke. Rates for Hispanic Americans are only one-half the white rate.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO STROKES

The 1994-1998 data indicated that approximately 560 years of potential life were lost annually due to strokes among racial and ethnic minority residents of Nebraska *(Table 9)*. African Americans and Native Americans in the state lost about three times as many potential years of life to this cause of death per person as white Nebraskans.

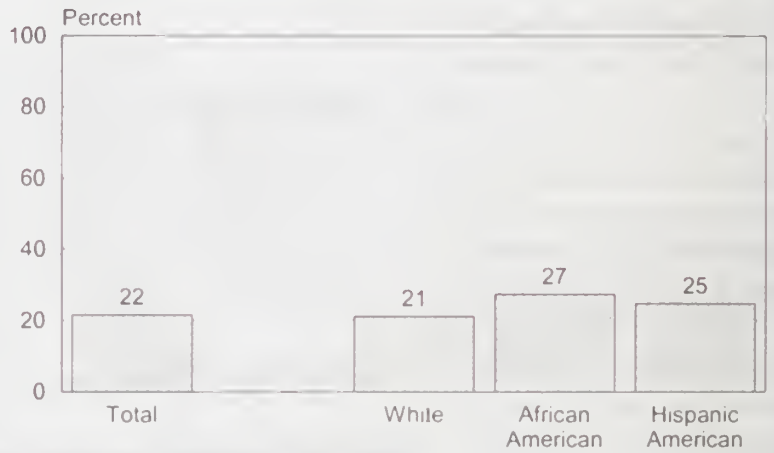
RISK FACTORS

SMOKING

Tobacco use is the cause of about 418,000 deaths each year throughout the United States according to 1999 data from the Center for Disease Control Tobacco Information and Prevention Source (TIPS). For every five deaths in the U.S., one is attributable to tobacco-related use and complications.

Figure 17

Prevalence of Cigarette Smoking* Nebraskans Age 18+ (1994-1998)



*Current daily and "some days" smokers
SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System

Smoking also triples the risk of dying from heart disease among middle-aged women and men.

Results of the 1994 National Health Interview Survey (NHIS) indicated that the smoking rate is higher among people living below the poverty level (35 percent) than those living at or above the poverty level (24 percent).

In Nebraska, the Behavioral Risk Factor Surveillance Survey (1994-1998) found that the proportion of adults who currently smoke cigarettes varies by race and ethnic origin *(Figure 17)*.

The rates for African Americans (27 percent) was slightly higher than those of whites (21 percent) and Hispanic Americans (25 percent).

Asian Americans and Native Americans did not have a sufficient number of respondents to calculate the smoking rate.

HYPERTENSION

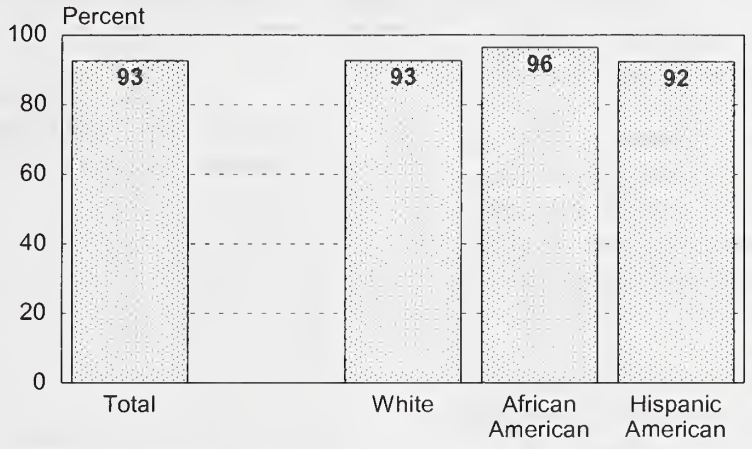
Persons with blood pressure higher than 140mm Hg systolic and 90 mm Hg diastolic and/ or taking antihypertensive medication are categorized as having high blood pressure, or hypertension.

High blood pressure increases the risk of developing coronary heart disease by two to four times the normal rate. High blood pressure also increases the risk of stroke, in that two-thirds of all stroke victims have hypertension. As a result, persons with high blood pressure are four to six times as likely as the general population to have a stroke.

Figure 18

Blood Pressure Checked in Past 2 Years

Nebraskans Aged 18 + (1995,1997,1999 Combined)



SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

Nationwide, African Americans and persons of Hispanic origin exhibit a higher prevalence of high blood pressure than non-Hispanic white persons. Acute hypertension rates are also four times higher among African American men than among white men.

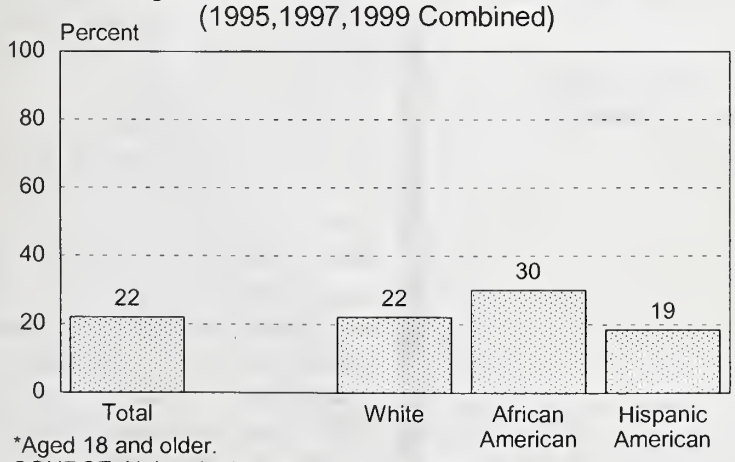
As revealed by the combined results of the 1995, 1997 and 1999 Nebraska BRFSS, a high percentage of Hispanic Americans (92 percent), African Americans (96 percent), and the white population (93 percent) report having their blood pressure tested in the past two years. Screening rates for Asian Americans and Native Americans were not calculated as a result of insufficient data. *(Figure 18).*

Figure 19

Ever Told Blood Pressure High

Among Nebraskans* Who Ever Had It Checked

(1995,1997,1999 Combined)



*Aged 18 and older.

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

Among those who ever had their blood pressure checked, 22 percent of Nebraskans overall indicated they had been told that it was high *(Figure 19).* African Americans continued to have the highest prevalence of high blood pressure (30 percent), therefore placing this segment of the population "at higher risk." Nearly one-fifth of Hispanic Americans (19 percent) had hypertension.

HIGH BLOOD CHOLESTEROL LEVEL

Nationwide, more than 52 million adult Americans suffer from high blood cholesterol levels. Adults with blood cholesterol levels in the high range of 239mg/dL and above have twice the risk of developing coronary artery disease of individuals with readings below 200 mg/dL.

The recommendation from the National Cholesterol Education Program is that blood cholesterol levels be checked at least once every five years in healthy adults aged twenty and older. An increasing proportion of the population have had their cholesterol levels checked.

The combined results of the Nebraska 1995, 1997, and 1999 Behavioral Risk Factor Surveillance Survey (BRFSS), indicated the proportion of adults who have had their cholesterol levels checked within the last five years varied slightly from one race/ethnic origin to the other. Statewide, 90 percent of all adults in Nebraska reported having had their blood cholesterol levels checked within the past five years *(Figure 20)*.

Figure 20

Cholesterol Level Checked in Past 5 Years

Nebraskans Aged 18 + (1995,1997,1999 Combined)

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

In comparison, the proportion of Hispanic Americans (95 percent), African Americans (92 percent), white Americans (90 percent) who had this testing done during the past five years is comparable to the statewide average (90 percent). The percentages for Asian and Native Americans were not calculated due to limited data.

Figure 21

Ever Told Cholesterol Level High

Among Nebraskans* Who Had It Checked

(1995,1997,1999 Combined)

*Aged 18 and older.

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

In Nebraska, African Americans were a little less likely than residents of the state overall (28 percent) to have been informed their cholesterol level is high. Among those who had their blood cholesterol level tested, 22 percent of African American adults indicated they were told it was high, based on the combined BRFSS *(Figure 21)*. Nearly three of every ten Hispanic and white Nebraskans (29 percent each) reported having an elevated blood cholesterol level.

OVERWEIGHT

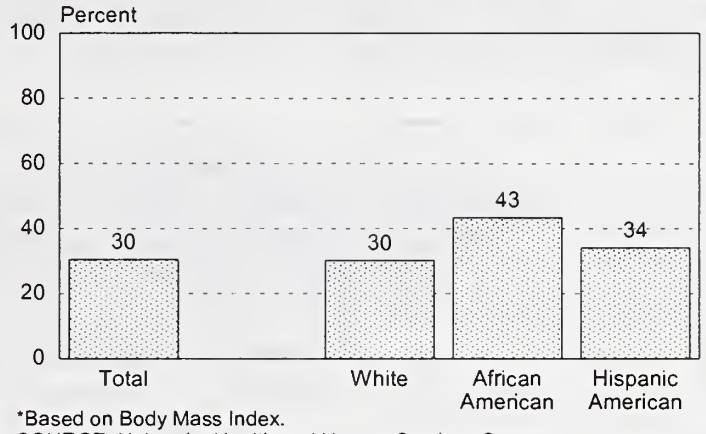
Obesity and other weight-related conditions result in more deaths in the United States than any other risk factor but smoking. According to the National Center for Health Statistics, there are over 300,000 overweight-related deaths each year in the United States.

According to the American Cancer Society, African Americans in the United States are at increased risk due to obesity as 37.7 percent of African American women and 28.4 percent of African American men are overweight as was reported by the Behavioral Risk Factor Surveillance System (BRFSS) in 1998-1999.

Figure 22

Prevalence of Overweight*

Among Nebraskans Aged 18 + (1994-1998)



*Based on Body Mass Index.

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

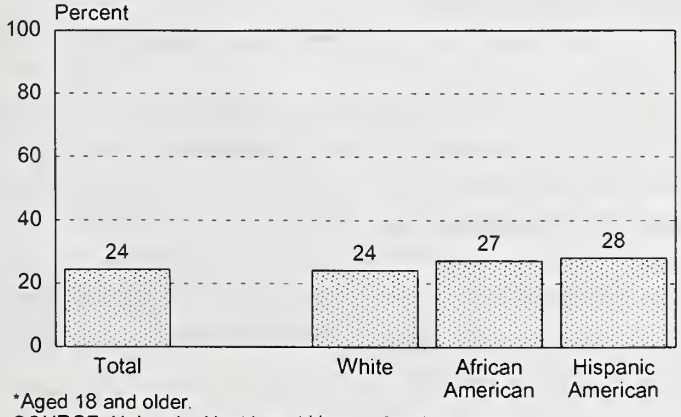
In Nebraska, the 1994-1998 Behavioral Risk Factor Surveillance System (BRFSS) reports that 30 percent of adult residents are obese or overweight, based on the Body Mass Index (BMI) *(Figure 22).*

On the average, adult Nebraskans who are African American (43 percent) or Hispanic American (34 percent) were more likely to be overweight than white residents (30 percent).

Figure 23

No Leisure-Time Physical Activity

Among Nebraskans* (1994,1996,1998 Combined)



*Aged 18 and older.

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

PHYSICAL INACTIVITY

Studies indicate that physically inactive people are almost twice as likely to develop heart disease as people who engage in regular exercise. Thus, physical inactivity joins smoking, high blood pressure, obesity and high blood cholesterol level as important cardiovascular risk factors.

According to the combined 1994, 1996 and 1998 BRFSS, nearly one-fourth of adult Nebraskans (24 percent) reported that they had not participated in any leisure-time physical activity during the past month (Figure 23).

Prevalence of physical inactivity was higher among Hispanics (28 percent) and African Americans (27 percent). The low number of respondents who were Native Americans or Asian Americans did not allow calculation of rates for these groups.

One-third of adult Nebraskans (33 percent) reported participating in leisure-time physical activity only irregularly *(Table 11)*. Thirty percent engaged in regular physical activity and an additional 13 percent indicated regular physical activity that is also strenuous enough to meet the Center for Disease Control and Prevention's objectives for "appropriate physical activity." (See definition below).

Table 11
Percentage of Nebraskans Engaged In Leisure-time Physical Activities (Physical Activity Level) By Race/Ethnicity (BRFSS1994-1998)

Groups	No Physical Activity	Irregular Activity	Regular Activity	Meets Activity Objectives
Nebraska	24	33	30	13
White	24	33	31	12
African Americans	27	36	23	14
Hispanic Americans	29	33	21	16

SOURCE: 1994, 1996, 1998 Combined Nebraska BRFSS

Sedentary Lifestyle: Definitions: According to CDC, "appropriate physical activity" is defined as "exercise which involves large muscle groups in dynamic movement for periods of 20 minutes or longer, three or more days per week, and which is performed at an intensity of 60 percent or greater of an individual's cardiorespiratory capacity." Based on this definition, the computer scoring system assigns each respondent to one of the following categories:

1) Sedentary—no leisure-time physical activity;
2) Irregularly Active—activity reported but duration and frequency is either less than 20 minutes per session, less than three times per week, or both;
3) Regularly Active, Not Meeting Objectives—activity reported and performed 20 minutes or more per session, three times or more per week, BUT either the "60 percent of cardiorespiratory capacity" of the "dynamic activity with large muscle groups" requirement has not been met;
4) Regularly Active, Meeting Objectives—above criteria have been met.

Persons who do not participate in any leisure-time physical activity and those who only exercise irregularly are considered "at risk" due to sedentary lifestyle. For white residents and for Nebraska adults overall, 57 percent were categorized as having a sedentary lifestyle.

Compared to the state's overall figures and the rates for white residents, both African Americans (63 percent) and Hispanic Americans (62 percent) are more likely to be at risk due to sedentary lifestyle. More than one-fourth of African Americans (27 percent) were physically inactive and 36 percent irregularly engaged in physical activities. Hispanic Americans present a similar profile with 29 percent participating in no leisure-time physical activities and 33 percent getting exercise irregularly.

DIABETES

Diabetes increases the risk of cardiovascular disease by two to three times.

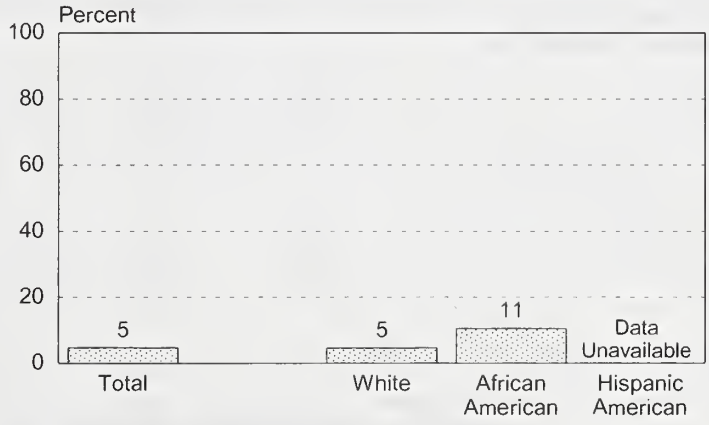
Cardiovascular disease is the leading cause of death among people with diabetes.

The Nebraska Behavioral Risk Factor Surveillance System of 1994-1998 indicates that 5 percent of adult Nebraskans have been told by their doctors that they have diabetes *(Figure 24)*. African Americans indicated a much higher prevalence of diabetes (11 percent) in comparison with the rate for white Nebraskans (5 percent). Native Americans, Hispanic Americans, and Asian Americans had insufficient data to allow for comparison.

Figure 24

Ever Told by a Doctor They Have Diabetes

Among Nebraskans Aged 18 + (1994-1998)



SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

PROGRESS TOWARD OBJECTIVES

Substantial progress has been recorded in decreasing the death rate due to coronary heart disease among African Americans in Nebraska *(Table 10)*. The 1994-1998 death rate (115.5) for this group in Nebraska declined by 31.7 percent from the 1991-1995 baseline, well below the Nebraska Year 2000 objective of 150 for this group.

Mortality due to strokes among African Americans in Nebraska has not decreased at all since the 1984-1988 baseline. The Nebraska baseline is 43.5 while the latest rate is 49.8 among this group, with an increase of 14.5 percent from 1984-1988.

Since cigarette smoking is a major risk factor for the development of cardiovascular disease and certain types of cancer and other diseases, African Americans, Native Americans and Hispanic Americans have been targeted for reductions in cigarette smoking rates. Based on the data from the 1994-1998 Nebraska Behavioral Risk Factor Surveillance System, substantial reductions in smoking prevalence would be required to reach the Year 2010 objectives: 33.3 percent for African Americans, and 28 percent for Hispanic Americans. There was no data available to analyze for Native Americans.

Obesity is also an important risk factor associated with cardiovascular disease. Reducing the prevalence of overweight among high-risk groups would aid in reducing mortality rates for cardiovascular disease. For African American women, prevalence of overweight would still need to be decreased by approximately 27 percent to achieve the Nebraska Year 2000 objective of no more than 30 percent overweight. For Hispanic women, a reduction of 47 percent would be required to reach the target prevalence of 25 percent or less. There was no available data to determine the percentage of reduction needed for Native Americans (both men and women).

Table 12
Cardiovascular Disease
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Deaths due to coronary heart disease/100,000 population								
African Americans	169.1	115.5	-31.7	150.0	168.0	140.0	-16.7	115.0
Deaths due to stroke/100,000 population								
African Americans	43.5	49.8	14.5	27.0	52.5	44.2	-15.8	27.0
Prevalence of cigarette smoking among adults age 18 and older (%)								
African Americans	NA	27	NA	18.0	33.0	26.0	-21.2	18.0
Hispanic Americans	NA	25	NA	18.0	24.0	18.0	-25	15.0
Native Americans	NA	NA	NA	20.0	42-70	35.0	NA	20.0
Prevalence of overweight--adults age 18 and older (%)								
African American women	NA	41	NA	30.0	44.0	52.0	18.2	30.0
Hispanic American women	NA	47	NA	25.0	39.0	50.0	28.2	25.0
Native Americans	NA	NA	NA	30.0	NA	43.0	NA	30.0

NOTE: Mortality data are age-adjusted to the 1940 standard.

SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
National--Healthy People 2000 Review, 1998-99. National Vital Statistics System.
Risk factor prevalence data (smoking, overweight)--Nebraska Behavioral Risk Factor Surveillance System, 1994-1998.
National smoking prevalence--National Health Interview Survey - baseline 1987and current 1995 for African Americans and Hispanic Americans. For Native Americans, baseline - 1979-87. Range of prevalence represents estimates for various tribes.
National overweight prevalence:
African American women: National Health and Nutrition Examination Survey (NHANES); women age 20-75; baseline years 1976-1980, current years 1998-1994.
Native Americans: Baseline Indian Health Service, OPEL; Current - National Health Interview Survey (NHIS); age 20 and older; baseline years 1984-1988, current 1995 (self-reported).
Hispanic American women: Mexican American women only; baseline - Hispanic NHANES; current - NHANES; age 20-74; baseline years 1982-1984, current 1988-1994.

CANCER

OVERVIEW OF HEALTH IMPACT

From the Nebraska Health and Human Services System's "Saving Lives In Nebraska – Cancer Facts & Figures 2000-2001," the following highlights about cancer:

- *From 1994 through 1998, cancer caused the deaths of 16,465 Nebraska residents, making it the second leading cause of death in the state, exceeded only by heart disease.*

- *During the five-year period, 1993-1997, 38,415 Nebraska residents were diagnosed with the disease. These represent new cases of cancer (cancer incidence).*

- *Due to size of the white population in Nebraska, more whites (15,869 or at the rate of 150.3 per 100,000 population) die from cancer than any other racial or ethnic group.*

- *However, cancer mortality rates (the number of deaths per 100,000 population) are higher among African Americans (214.9) and Native Americans (184.0) than other racial or ethnic groups.*

- *African Americans in Nebraska are more likely to develop cancer than any other racial or ethnic group and more likely to die of the disease. African American cancer mortality rates are almost 1.2 times higher than Native Americans' mortality rates and 1.4 times higher than whites.*

- *...though Native Americans in Nebraska develop cancer at lower rates than whites, their cancer mortality rate is 1.2 times higher. Native American have a higher lung cancer and bronchus cancer mortality rate than any other racial or ethnic group except African Americans.*

- According to the National Cancer Institute, "smoking is responsible for about 30 percent of all cancer deaths annually in the United States or more than 155,000 each year."

The National Center for Health Statistics reported an estimated total of 2,314,245 new cancer cases (in all forms) in the United States in 1997. Cancer in all forms remains the number two leading cause of death (539,577 deaths attributable to this cause). Information from the Cancer Information Service (CIS), a program of the National Cancer Institute, reveals that for the year 2000, an estimated 552,500 Americans will die from all types of cancer, which is about 24 percent of all projected deaths nationwide.

In Nebraska, cancer continues to be ranked the number two leading cause of death after heart disease, with a total of 3,278 deaths in 1998, according to the Nebraska Vital Statistics Report.

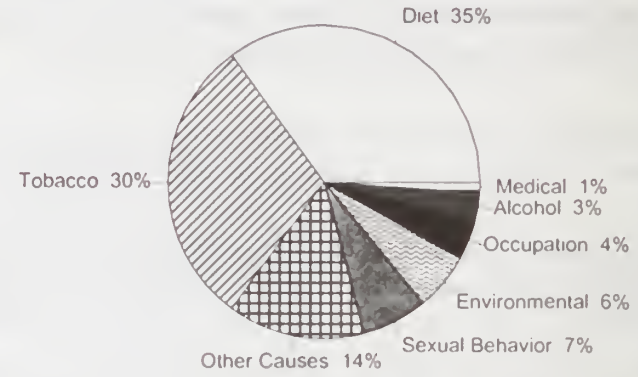
Research consistently indicates that certain cancers can be treated and cured if detected early. It has been shown that a majority of all cancer-related deaths can be attributed to lifestyle or environment. Dietary factors are responsible for about 35 percent of cancer deaths, while tobacco use accounts for 30 percent *(Figure 25).* Reproductive and sexual behaviors account for 7 percent of all cancer mortality. Occupational (4 percent) and environmental hazards (6 percent) also contribute to all cancer deaths.

Changing high-risk behaviors related to smoking and high-fat diets would reduce the chances and risk of developing cancer for many people. Early detection procedures such as mammograms and Pap smears, as well as colorectal cancer screening, also have potential for reducing cancer mortality.

Nationally, the five-year survival rate for all types of cancer combined is about 61 percent for white patients and about 48 percent for African Americans. Socioeconomic factors which influence patient access to and use of health care early in the disease and access to state-of-the-art treatment may account for a substantial part of this difference in survival rates.

Figure 25

Contribution of Lifestyle and Environmental Factors to Cancer Deaths (U.S.)



SOURCE National Cancer Institute, 1986

CURRENT RATES

INCIDENCE RATES

National trends show that the age-adjusted incidence rate for cancer increased between 1973 and 1992. Since then, the number of new cases per 100,000 population has been declining.

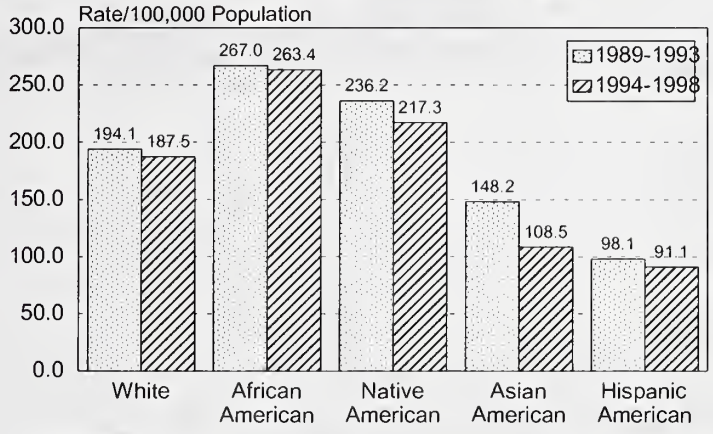
DEATHS DUE TO CANCER

Nationwide, cancer has continued to rank second as a cause of death, with a total of 538,947 deaths (or 23.1 percent) of the total reported in 1998. Cancer death rates have been gradually declining since 1990. In Nebraska, there were 3,278 deaths attributed to cancer in 1998. Cancer was also the second leading cause of death in Nebraska resulting in 21.6 percent of all deaths in 1998.

Cancer was the cause of 25.9 percent of Asian American deaths and 20.8 percent of African American deaths. Cancer accounted for 16.1 percent of all deaths in the Hispanic community and 14.3 percent of all deaths in the Native American community *(Figure 26).*

Figure 26

Cancer Mortality Rates*
by Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

In Nebraska, cancer mortality rates for the five-year period 1994-1998 decreased slightly for all racial and ethnic groups *(Figure 26).* According to the 1994-1998 age adjusted mortality rates per 100,000 population, African Americans led with 263.4 cancer deaths per 100,000 population. The death rate in the Native American community was 217.3. The cancer death rate among whites was 187.5, while Asian Americans and Hispanic Americans witnessed 108.5 and 91.1 deaths per 100,000 *(Table 13).*

Thus African Americans in the state have 1.4 times the risk of dying from cancer than whites experience. Native Americans are 1.2 times more likely to die from cancer than whites, while Asian and Hispanic Americans are less likely than white Nebraskans to die from cancer.

Nationally, for Asian Americans, lung, prostate, colon and rectum are the most prevalent cancer sites. For Native Americans, it is colorectal, prostate, colon and rectum, kidney, breast and ovary. Prostate, breast, lung, colon, rectum, uterine cervix and corpus uteri in women are mainly the sites in the Hispanic population.

Table 13
Cancer
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Cancer (All Sites)								
White	194.1				187.5			
African American	267.0	1.4	1.5	1.2	263.4	1.4	1 6	1.3
Native American	236.2	1.2	1 2	1.2	217.3	1 2	1.3	1 2
Asian American	148.2	0.8	0.8	0.7	108.5	0.6	0.5	0.6
Hispanic American	98.1	0.5	0.5	0.5	91.1	0.5	0.4	0.6
Lung Cancer								
White	49.8				50.3			
African American	88.4	1.8	1.7	1.8	69.5	1.4	1.4	1.3
Native American	80.7	1.6	1.5	1.9	55.3	1.1	1.3	0.9
Hispanic American	19.7	0.4	0.3	0.5	13.7	0.3	0.2	0.4
Colorectal Cancer								
White	22.7				22.2			
African American	21.5	0.9	1.3	0.7	32.5	1.5	1.6	1.4
Breast Cancer (Females)								
White	31.6				28.4			
African American	33.0			1.0	36.4			1.3
Cervical Cancer (Females)								
White	2.2				2.7			
African American	9.8			4.5	3.9			1.4
Prostate Cancer (Males)								
White	34.0				29.8			
African American	54.6		1.6		57.8		1.9	

*Age-adjusted to 2000.

SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO CANCER

In total, cancer deaths among Nebraska ethnic and racial population amounted to 2,260.8 years of potential life lost annually *(Table 14)*. The highest toll of YPLL occurred among African Americans with 1.6 times as many years of potential life lost per person as white Nebraskans. Native Americans also experienced more potential years of life lost than white residents (1.4 times as many).

Table 14
Years of Potential Life Lost -- Cancer
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Cancer						
White	117,022	1,646.9		114,715	1,519.9	
African American	4,883	2,420.7	1.5	5,882	2,382.1	1.6
Native American	475	1,315.7	0.8	887	2,111.0	1.4
Asian American	416	969.8	0.6	451	795.6	0.5
Hispanic American	1,105	831.1	0.5	1,823	891.0	0.6
Average/Year (Minorities)	1,719.8			2,260.8		
Lung Cancer						
White	30,083	425.0		29,846	393.7	
African American	1,518	834.1	2.0	1,529	690.1	1.8
Native American	157	466.4	1.1	219	635.6	1.6
Hispanic American	146	131.0	0.3	223	123.3	0.3
Colorectal Cancer						
White	10,694	150.2		11,055	146.4	
African American	295	147.7	1.0	563	235.6	1.6
Breast Cancer (Females)						
White	12,922	367.5		12,333	326.9	
African American	604	548.2	1.5	615	464.6	1.4
Cervical Cancer (Females)						
White	1,429	41.3		1,930	51.0	
African American	180	153.3	3.7	108	77.0	1.5
Prostate Cancer						
White	2,766	74.3		2,260	59.9	
African American	101	123.0	1.7	113	125.1	2.1

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

LUNG CANCER

CURRENT RATES

DEATHS DUE TO LUNG CANCER

Lung cancer is the leading cause of cancer deaths in Nebraska, claiming the lives of 871 Nebraskans in 1998. Although mortality rates have risen since 1960, they have declined since 1993. Rates for men have decreased more than those for women, but men still died from lung cancer at more than twice the rate of women. Comparing the rates for 1994-1998 with the previous five-year period *(Table 13)*, the lung cancer death rate for whites increased only slightly. Rates for African Americans, Native Americans, and Hispanic Americans all had decreased from the 1989-1993 rates.

As in the previous five-year period, African Americans continued to have the highest lung cancer death rate of any racial/ethnic population in Nebraska, with an age-adjusted rate of 69.5 per 100,000 population (an average of 27 deaths per year). The risk of lung cancer death among African Americans in Nebraska is 1.4 times the risk for whites. As in the general population, death rates among African American men are close to twice as high as the rate for women.

The lung cancer mortality rate for Native Americans (55.3) was much lower in 1994-1998 than in the previous five-year period (80.7). The relative risk of lung cancer death declined from 1.8 in 1989-1993 to 1.1 for 1994-1998. Close to three-quarters of the deaths among this ethnic group occurred in men.

Lung cancer mortality rates for Hispanic Nebraskans were very low — 13.7 deaths per 100,000 population or an average of four deaths per year for 1994-1998.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO LUNG CANCER

In Nebraska, during the five year period 1994-1998 an average of 394.2 years of potential life were lost to lung cancer among African Americans, Native Americans and Hispanic Americans combined. African Americans lost 1.8 times as many years of potential life per person to this disease as white Nebraskans, while Native Americans lost 1.6 times a many as whites *(Table 14)*.

RISK FACTORS ASSOCIATED WITH LUNG CANCER

Smoking: Nationwide, cigarette smoking is the primary cause of lung cancer deaths with over 430,000 Americans dying from this disease yearly.

COLORECTAL CANCER

CURRENT RATES

DEATHS DUE TO COLORECTAL CANCER

Colon and rectal cancers are the second leading cause of cancer deaths in the United States, accounting for 11 percent of all cancer deaths.

New cases of colon (93,800) and rectal cancer (36,400) or a combined 130, 200 are estimated for 2000. It is estimated that colorectal cancers will cause the deaths of 56,300 Americans, with colon cancer contributing 47,700 of those deaths and rectal cancer causing the remaining 8,600 deaths.

Although colorectal cancer death rates have remained steady for white Nebraskans, the 1994-1998 mortality rate for African Americans increased by 51 percent from the 1989-1993 rate *(Table 13)*. The current rate for African Americans (32.5) is also substantially higher than the rate for white residents of the state (22.2). The relative risk for this population is 1.5 times the risk for whites.

An average of 235.6 years of potential life were lost annually among African Americans who died from colorectal cancer over the last five-year period *(Table 12)*. African Americans lost 1.6 times as many years of potential life to this disease per person as white Nebraskans did.

RISK FACTORS

Diet and other risk factors. Researchers have shown that age, personal history and family history of colorectal cancers and inflammation of the bowels are contributory factors to the incidence of colorectal cancer. In addition, high levels of inactivity, poor diet or a diet laden with saturated fat and low fiber, and coupled with inadequate consumption of fruits and vegetables contribute to the high incidence of this disease.

BREAST CANCER

CURRENT RATES

DEATHS DUE TO BREAST CANCER

Nationwide, breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among women. In the last ten years, breast cancer mortality rates have declined both in Nebraska and in the United States at large, with rates declining by 24 percent in Nebraska since 1990.

The breast cancer death rate for white women in Nebraska decreased slightly in 1994-1998 compared to the previous five years *(Table 14)*. For African American women, however, the rate increased by about 10 percent. African American women (36.4 deaths per 100,000 population) in Nebraska also had a higher mortality rate from breast cancer than white women (28.4), resulting in a relative risk of 1.3.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO BREAST CANCER

The number of years of potential life lost per 100,000 population was 1.4 times as high for African American women in the state *(Table 14)* as it was for white women. In 1994-1998, African American women lost an average of 123 years of potential life annually to breast cancer.

RISK FACTORS ASSOCIATED WITH BREAST CANCER

Many breast cancer risk factors such as age, family history of breast cancer, reproductive history, previous breast disease, and race/ethnicity are not subject to intervention. However, being overweight, for women who have already experienced menopause, is one risk factor that can be addressed.

MAMMOGRAPHY AND BREAST SELF-EXAMINATIONS

Lack of screening is another risk factor that can be eliminated. Early detection and treatment can reduce deaths due to breast cancer by as much as 30 percent.
To this effect:

> *The American Cancer Society recommends that women age 40 and older have an annual mammogram, an annual clinical breast examination by a health care professional, and perform monthly breast self-examination. Women ages 20-39 should have a clinical breast exam performed by a health care professional every three years and should perform monthly breast self-examination...When a woman has a suspicious lump or when a suspicious area is identified on a mammogram, diagnostic mammography can help determine whether additional tests are needed and if there are other lesions that are too small to be felt in the same or the opposite breast. All suspicious lumps should be biopsied for a definitive diagnosis, (Cancer Facts & Figures 2000, p.8).*

MAMMOGRAMS

Among female respondents to the Nebraska BRFSS who were age 40 and older, the proportion who said they had ever had a mammogram varied somewhat by race and ethnicity. However, the majority of respondents in each group stated they had a mammogram at some time *(Figure 27).*

According to the 1994-1998 Nebraska Behavioral Risk factor Surveillance System, African American women were more likely than other racial groups to report ever having a mammogram (82 percent). Among white women in this age group, 77 percent stated they ever had this test, as did 74 percent of Hispanic American women.

Sixty-eight percent of African American women age 40 and older had a mammogram within the past two years compared to 64 percent of white women in Nebraska. Slightly more than one-half of all Hispanic women in this age group (53 percent) had this screening in the last two years.

Because of insufficient data, information for Native American and Asian American women in Nebraska cannot be produced.

Figure 27

Ever Had a Mammogram
Nebraska Women Aged 40 + (1994-1998)

SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

CERVICAL CANCER

CURRENT RATES

DEATHS DUE TO CERVICAL CANCER

Cervical cancer is one of the most frequently occurring cancers among women. Nationally, an estimated 12,800 new cases of invasive cervical cancer are expected to be diagnosed, along with an estimated cervical cancer mortality of 4,600 in 2000. With increased Pap screening for early detection and other modern techniques of treatment, deaths due to cervical cancer have been reduced.

The cervical cancer death rate among African American women in Nebraska decreased from 9.8 per 100,000 women in 1989-1993 to 3.9 in 1994-1998 *(Table 13)*. Relative risk of death from cervical cancer decreased from 4.5 times the risk (1989-1993) for white women to a relative risk of 1.4 in the five-year period 1994-1998.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO CERVICAL CANCER

Among African American women an average of roughly 22 years of potential life were lost each year due to cervical cancer deaths in 1994-1998 *(Table 12)*. Women in this racial group lost 1.5 times as many years of potential life per person as white Nebraskans.

RISK FACTORS ASSOCIATED WITH CERVICAL CANCER

Age. The risk of cervical cancer increases with age. Age therefore influences both cervical cancer incidence and survival rate. While younger women are more likely to be diagnosed with this form of cancer, older women are most often diagnosed at later stages of the disease and are thus more likely to die from it. About 70 percent of cervical cancer deaths occur in women aged fifty and older.

Sexual Activity. The risk of developing cervical cancer is higher in women who experienced sexual intercourse at a very early age and in those who had or have many sex partners. The risk of cervical cancer is also linked to sexually transmitted diseases particularly the human papillomavirus.

Smoking. Smoking has been shown by various studies to cause cervical cancer.

Socioeconomic Status. Low socioeconomic status is also a factor in this disease.

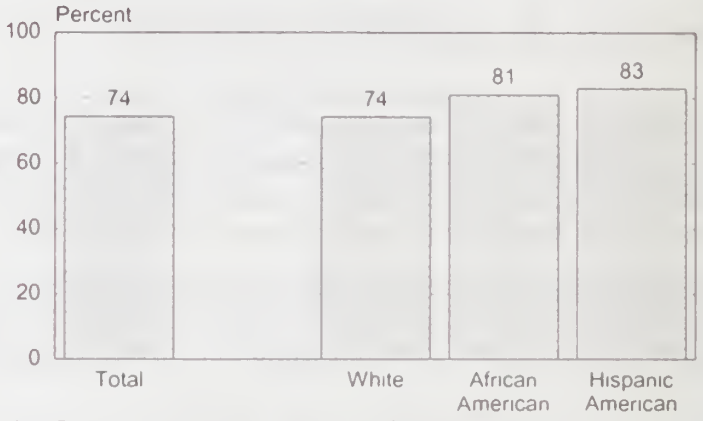
Lack of Screening and Early Detection. White women are more likely than African American women to be diagnosed with cervical cancer at an early stage. Fifty-four percent of white and 44 percent of African American women with cancer are diagnosed at localized stages.

Based on the 1994-1998 BRFSS, about three-fourths of all Nebraska women age eighteen years and older (74 percent) stated that they had a Pap test during the past two years. Seven percent had never had this test done.

African American women (81 percent) and Hispanic American women (83 percent) were more likely than Nebraska women in general (74 percent) to report having a Pap test within the past two years *(Figure 28)*. Seventy-four percent of white Nebraskan women reported having had Pap screening in the last 2 years.

Figure 28

Had Pap Test in Past 2 Years
Nebraska Women Aged 18 + (1994-1998)



SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

PROSTATE CANCER

CURRENT RATES

According to the American Society of Cancer's Facts & Figures 2000, nationally:

An estimated 180,400 new cases were reported in the US during 2000. Prostate cancer incidence rates remain significantly higher in black men than in white men. Between 1989 and 1992, prostate cancer incidence rates increased dramatically, probably due to earlier diagnosis in men without any symptoms, by increased use of prostate-specific antigen (PSA) blood test screenings. Prostate cancer incidence rates are now declining; rates peaked in 1992 among white men and in 1993 among black men.

Deaths. *An estimated 31,900 prostate cancer deaths occurred in 2000, making it the second leading cause of cancer death in men. During 1992-1996, prostate cancer mortality rates declined significantly (-2.5% per year). Although mortality rates are declining among white and black men, rates in black men remain more than twice as high as rates in white men.*

Although the prostate cancer mortality rate for whites has decreased from 34.0 in 1989-1993 to 29.8 in 1994-1998 in Nebraska, the mortality rate among African Americans in the state (57.8) experienced an increase from 54.6 in the previous five-year period *(Table 13)*. The latest rate is nearly twice as high as the rate for white males in Nebraska.

Since prostate cancer deaths generally occur among men over 65 years, the number of years of potential life lost due to prostate cancer was fairly low for African American males, averaging 25 years annually *(Table 14)*. However, the estimated number of years lost per person are more than twice as high for African American men as for white men in the state.

RISK FACTORS

Several studies aimed at discovering the actual causes of prostate cancer have been conducted, but findings have not been sufficient to pinpoint the exact causes of this disease.

According to the American Cancer Society, "African Americans and people 65 years and older continue to be the only two groups known to be at particularly high risk of developing this disease."

Recent genetics studies suggest that prior family pre-dispositions could be responsible for the disease five to ten percent of the time. Other international studies indicate that dietary fats may also contribute to the incidence of prostate cancer.

Early Detection. According to national data, men with prostate cancer have an excellent chance of survival if the disease is diagnosed and treated early. The American Cancer Society recommends that all men over the age of 40 years have a digital rectal examination every year and that men over 50 years have a prostate-specific antigen test every year.

The Society also suggested that men who know they are at high risk for prostate cancer— including African American men who have a strong familial history of prostate cancer— should not wait until they turn 50, but rather should consider undergoing these tests earlier.

PROGRESS TOWARD OBJECTIVES

One Nebraska Year 2000 objective is to reduce overall deaths due to lung cancer among African American males *(Table 15)*. The latest lung cancer mortality for this population group (90.2) represents a decrease of 35.4 percent from the 1984-1988 baseline. Notwithstanding this decrease, the mortality rate is still very high for this group. To achieve the 2000 objective for lung cancer, an additional decrease of 45 percent would be needed.

To help reduce the incidence of lung cancer, cardiovascular and other diseases, African Americans, Native Americans, and Hispanic Americans have been targeted for reductions in cigarette smoking. Based on data from the Nebraska Behavioral Risk Factor Surveillance System (1994-1998), substantial reductions in smoking prevalence would be required to reach the Year 2000 objectives: 33 percent for African Americans and 28 percent for Hispanic Americans.

Compared to the Nebraska baseline, 1994-1998 breast cancer mortality rates for African American women have increased. To achieve the year 2000 objective, a decrease of 29 percent in rates would be necessary.

Increasing the rate at which women receive cancer screening should help to reduce the number of breast cancer cases diagnosed at late stages of development and mortality as well. The percent of African American women who have ever had a mammogram was 82 percent in 1994-1998 and thus achieved the objective set for the year 2000. Among Hispanic women, however, only 74 percent had received this screening compared to the target rate of 80 percent.

Cervical cancer death rates among African American women in Nebraska were down considerably (70.6 percent) in 1994-1998, compared to the baseline. This current rate of 3.5 deaths per 100,000 women achieves the Nebraska target of no more than 5.9 deaths per 100,000.

Increasing the rate at which women receive cancer screening should aid in the reduction of cervical cancer deaths. Based on results of the 1994-1998 BRFSS, 93 percent of Hispanic American women had ever had a Pap test to screen for cervical cancer. However, to achieve the Nebraska objective of at least 95 percent of women receiving this screening, an increase of a little more than 2 percent in the screening rate would be required.

Table 15
Cancer
Baseline, Current Data and Year 2000 Objectives
For U S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1996	% Change Current vs Baseline	National Year 2000 Objective
Deaths due to lung cancer/ 100,000 males								
African American men	139.7	90.2	-35 4	50 0	100.1	73.4	-26 7	91 0
Prevalence of cigarette smoking among adults age 18 and older (%)								
African Americans	NA	27	NA	18	33	26	-21	18
Hispanic Americans	NA	25	NA	18	24	18	-25	15
Native Americans	NA	NA	NA	20	42-70	35	NA	20
Deaths due to breast cancer/ 100,000 females								
African American women	23.0	29 3	27.4	20 7	30 3	26 5	-12.5	25 0
Percent of women age 40 and older who have ever had a mammogram								
African American women	NA	82	NA	80	28	56	100	80
Hispanic American women	NA	74	NA	80	20	50	150	80
Deaths due to cervical cancer/ 100,000 females								
African American women	11.9	3 5	-70 6	5 9	6 8	4 7	-30 9	3 0
Percent of women who have ever had a Pap test								
Hispanic American women	NA	93	NA	95	75	91	21	95

NOTE: Mortality data are age-adjusted to the 1970 standard

SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System
National: Healthy People 2000 Review 1998-99. National Vital Statistics System, 1990 baseline, 1996 current.
Smoking prevalence data--Nebraska Behavioral Risk Factor Surveillance System, 1994-1998.
National smoking prevalence--National Health Interview Survey - baseline 1987and current 1995 for African Americans and Hispanic Americans. For Native Americans, baseline - 1979-87. Range of prevalence represents estimates for various tribes.
Screening data (mammograms and Pap tests)--Nebraska Behavioral Risk Factor Surveillance System, 1994-1998.
National screening data--National Health Interview Survey - 1987 baseline, 1994 current.

Maternal and Child Health

OVERVIEW OF HEALTH IMPACT

INFANT MORTALITY

According to the U.S. Department of Health and Human Services' document, "Race and Health: Infant Mortality: How to Reach the Goals," updated in September 1999,

Eliminating disparities in infant mortality rates is the primary goal. This report states that Infant mortality is an important measure of a nation's health and a worldwide indicator of health status. Although infant mortality in the United States has declined steadily over the past several decades and is at a record low of 7.2 per 1,000 live births (1996 data), the United States still ranks 24th in infant mortality compared with other industrialized nations.

To reduce infant mortality, the U.S. Department of Health and Human Service provided the following suggestions:

> *"To achieve further reductions in infant mortality and morbidity, the public health community, health care providers, and individuals must focus on modifying the behaviors, lifestyles, and conditions that affect birth outcomes, such as smoking, substance abuse, poor nutrition, other psychosocial problems (e.g., stress, domestic violence), lack of prenatal care, medical problems, and chronic illness."*

Medical advances and improved access to medical care have resulted in a decline in infant mortality rates in all segments of the population over the past fifty years. Overall infant mortality reached an all-time low of 7.2 infant deaths per 1,000 live birth in the United States in 1996. However, a higher proportion of babies who are racial or ethnic minorities die before their first birthdays than do white infants.

In the five-year period, 1994-1998, birth defects contributed to 27 percent of the total infant deaths in the white community; 12 percent in the African American community, 38 and 29 percent in the Asian and Hispanic communities *(Table 16)*. There was no record of any infant deaths due to birth defects in the Native American communities.

Birth defects were more commonly reported as a cause of death among Hispanic, Asian American and white infants, while Sudden Infant Death Syndrome (SIDS) accounted for a greater proportion of African American (23 percent) and Native American (27 percent) infant deaths. Prematurity was listed more frequently as a cause of death for African American (21 percent) infants than for other racial/ethnic groups, while accidents were a more common cause of death for Native American (27 percent) babies. Asian American babies died from respiratory distress syndrome (RDS) 15 percent of the time.

Table 16
Leading Causes of Infant Deaths
By Race and Ethnic Origin in Nebraska
1994-1998

Cause of Death	Percent of All Infant Deaths				
	White (N=769)	African American (N=97)	Native American (N=15)	Asian American (N=13)	Hispanic American (N=82)
Birth defects	27	12	0	38	29
Sudden Infant Death Syndrome (SIDS)	14	23	27	0	11
Prematurity	7	21	0	8	11
Other perinatal conditions	8	7	13	8	9
Maternal complications	6	8	0	8	6
Other respiratory conditions	6	2	0	0	0
Accidents	3	3	27	0	5
Respiratory Distress Syndrome	6	2	0	15	2
All other causes	23	22	33	23	27
TOTAL	100	100	100	100	100

SOURCE: Nebraska Health and Human Services System, Vital Statistics.

MATERNAL MORTALITY

Nationwide, the maternal mortality rate for African American women is four times that for white women. However, of the four maternal deaths occurring in Nebraska during the period 1994 to 1998, one was a Hispanic American mother and three were white non-Hispanic mothers.

CURRENT RATES

INFANT MORTALITY

There are substantial differences among racial groups with regard to infant mortality *(Figure 29).* Infant mortality rates for African Americans (20.4 per 1,000 live births) were approximately 2.9 times the rate for whites in Nebraska (7.1) over the five-year period 1989-1993 *(Table 17).* For the five-year period 1994-1998, the infant mortality rate for African Americans was 15.5 per 1,000 live births, or 2.1 times the rate for white Nebraskans, which was 7.3. Although the current five-year rate shows some improvement in mortality compared to the previous five years, a closer look reveals that death rates for African American babies have risen each year since 1995.

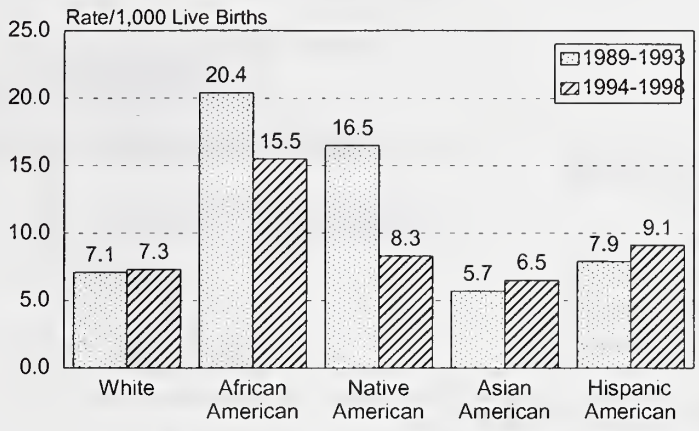
The latest (1994-1998) Nebraska infant mortality rate (15.5) for African American babies far exceeds the national rate (7.0 deaths per 1,000 live births).

Among Native Americans in Nebraska, the 1989-1993 infant mortality rate was 16.5 per 1,000 live births, compared to the latest five-year period (1994-1998) rate of 8.3. The latest Nebraska rate is lower than the national infant mortality rate for Native Americans (13.1).

The Hispanic infant mortality rate for the 1994-1998 period was 9.1, indicating an increase from the previous period. This rate is 1.2 times as high as the rate for white babies during this period.

Figure 29

Infant Mortality Rates
By Race and Ethnic Origin



SOURCE: Nebraska Health and Human Services System, Vital Statistics.

The infant mortality rate for Asian Americans over the 1994-1998 period, though based on a small number, was 6.5 deaths per 1,000 live births, which indicated a slight increase over the 1989-1993 period. Relative risk of infant mortality for this group was 0.9 times the white rate.

"Neonatal" deaths are deaths of infants less than 28 days of age. "Post-neonatal" deaths refers to deaths of infants from 28 days of age up to age one year. The greatest number of infant deaths generally occur during the first 28 days of life. In Nebraska, the 1994-1998 overall neonatal death rate (5.1 per 1,000 live births) had increased by 13 percent, while the postneonatal death rate (2.6) was down by 26 percent from the 1989-1993 rates.

Table 17
Maternal and Child Health
Rates and Relative Risk of Mortality and Inadequate Prenatal Care
For Nebraska Racial and Ethnic Minority Populations

	1989-1993		1994-1998	
	Rate per 1,000 Live Births	Relative Risk	Rate per 1,000 Live Births	Relative Risk
Infant Mortality				
White	7.1		7.3	
African American	20.4	2.9	15.5	2.1
Native American	16.5	2.3	8.3	1.1
Asian American	5.7	0.8	6.5	0.9
Hispanic American	7.9	1.1	9.1	1.2
PostNeonatal Mortality				
White	3.1		2.4	
African American	9.0	2.9	5.2	2.2
Native American	10.1	3.3	6.6	2.8
Asian American	2.1	0.7	1.5	0.6
Hispanic American	4.1	1.3	2.8	1.2
Low Birth Weight				
White	52.0		61.3	
African American	122.8	2.4	120.0	2.0
Native American	52.7	1.0	57.9	0.9
Asian American	66.6	1.3	74.5	1.2
Hispanic American	63.3	1.2	62.7	1.0
No Prenatal Care or Care Beginning After First Trimester (%)				
White	15.9		14.8	
African American	33.6	2.1	28.7	1.9
Native American	37.2	2.3	31.5	2.1
Asian American	27.1	1.7	19.0	1.3
Hispanic American	37.3	2.3	32.7	2.2
Inadequate Prenatal Care (%) Based on Kotelchuk Index Score*				
White	9.5		8.8	
African American	26.0	2.7	21.5	2.4
Native American	29.9	3.1	24.8	2.8
Asian American	15.3	1.6	12.0	1.4
Hispanic American	27.6	2.9	22.8	2.6

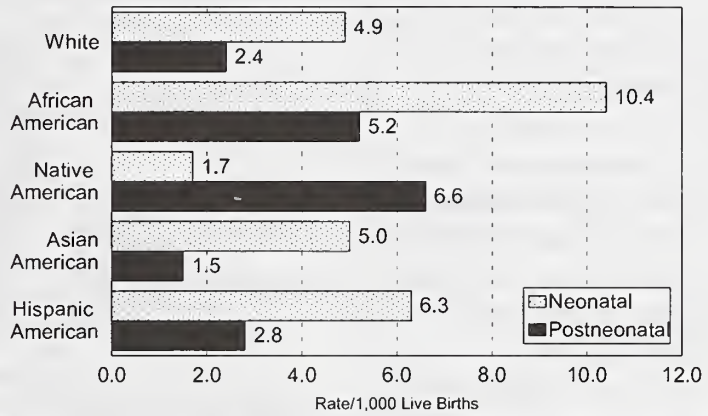
*Inadequate Kotelchuk Index Score: Baseline - 1990-1993; Current 1994-1998.

SOURCE: Nebraska Health and Human Services System, Vital Statistics.

For African Americans, two-thirds of the infant deaths occurred in the neonatal period *(Figure 30).*

Both the neonatal (10.4) and post-neonatal (5.2) death rates for these babies decreased in1994-1998 from the previous five years *(Table 17).* However, the neonatal death rate for African American babies was by far the highest for any racial/ethnic group in Nebraska and more than double the white rate. The post-neonatal death rate was also more than double the rate for white babies and higher than rates for all other racial/ethnic groups except Native Americans.

Figure 30
Neonatal and PostNeonatal Mortality
By Race and Ethnic Origin of Mother
1994-1998



SOURCE: Nebraska Health and Human Services System, Vital Statistics.

Unlike other racial and ethnic groups in Nebraska, for Native Americans the post-neonatal death rate (6.6 in 1994-1998) was much higher than the neonatal rate (1.7). Both the neonatal and post-neonatal infant mortality rates declined sharply in 1994-1998 compared to the previous five years. Still, the post-neonatal death rate for Native American babies exceeded corresponding rates for all other racial and ethnic groups in Nebraska.

For Hispanic Americans, seven out of ten infant deaths occurred in the first 28 days of life. The neonatal mortality rate in 1994-1998 (6.3 infant deaths per 1,000 live births) was higher than the rates for any group except African American newborns. The post-neonatal death rate for Hispanic American babies (2.8) was near the rate for white infants (2.4).

There were 13 deaths of Asian American infants recorded during the five-year period 1994-1998, with the majority of these deaths occurring during the neonatal period.

RISK FACTORS

LOW BIRTH WEIGHT (LBW)

When compared with infants of normal birth weight, low birth weight babies (weighing less than 2,500 grams or 5.5 pounds) are five to ten times as likely to die during the first year of life. In addition, pre-term low birth weight infants are about three times more likely to die than full-term low birth weight infants.

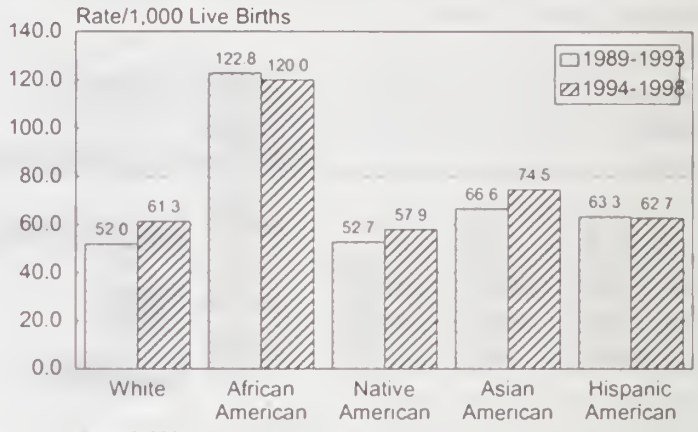
In Nebraska, although low birth weight babies comprised about 6 percent of all births, these infants accounted for 61 percent of all infant deaths in 1994-1998. The mortality rate among low birth weight infants averaged 72.9 per 1,000 births, more than twenty times as high as the rate for normal and high birth weight infants (3.1) in the state.

In addition to excess mortality associated with low birth weight and prematurity, these infants who survive the neonatal period are at greater risk for developmental delays, chronic illness, and prolonged and/frequent hospitalizations.

Risk factors associated with low birth weight, premature and "problem" deliveries include: young or advanced maternal age, poverty, smoking, alcohol or substance abuse, inability to obtain health care, and other health problems.

Figure 31

Low Birth Weight* Rates
By Race and Ethnic Origin

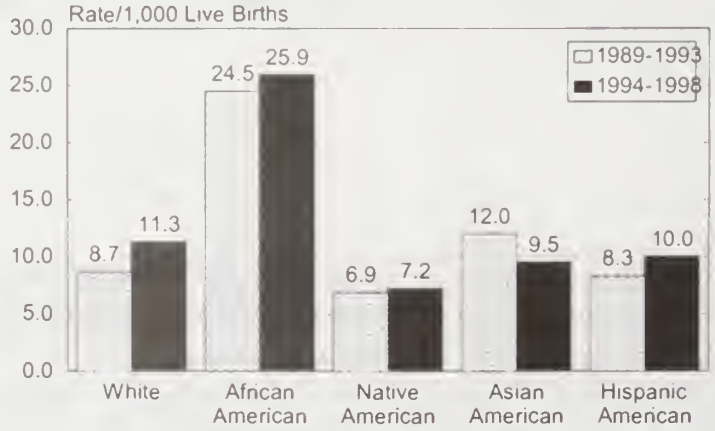


*Weighing <2,500 grams at birth.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

There were substantial differences in prevalence of low birth weight by race or ethnic origin in Nebraska *(Figure 31, Table 17)*. The 1994-1998 rate of low birth weights remained stable for African Americans (120.0 per 1,000 live births) compared to 122.8 for 1989-1993. The rates for whites (61.3), Native Americans (57.9), and Asian Americans (74.5) in the current five-year period all indicated a gradual upward trend when compared with the same rates over the previous five-year period. For Hispanic Americans (62.7), the rate remained stable.

Figure 32

Very Low Birth Weight* Rates
By Race and Ethnic Origin



*Weighing <1,500 grams at birth.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

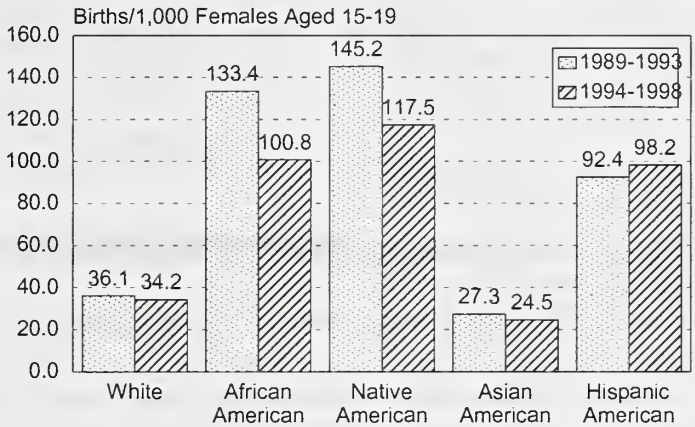
Infants weighing less than 1,500 grams at birth (about 2 pounds) are considered very low birth weight (VLBW). For the five-year period 1994-1998, there were 11.3 very low weight births per 1,000 live births among whites. African Americans (25.9) were two to three times as likely as any other racial or ethnic group in the state to deliver VLBW babies *(Figure 32)*. Rates for very low weight births rose for all racial/ethnic groups but Asian Americans in 1994-1998 compared to 1989-1993.

Studies done in the past and by the American Journal of Preventive Medicine have found that the higher prevalence of VLBW infants among African Americans accounts for almost two-thirds of the gap in infant mortality risk between this population group and whites in the United States. The study concludes that, because pre-term delivery is associated with deaths from VLBW, identifying strategies that have the potential to reduce pre-term births is essential to narrowing or eliminating the gap in infant mortality.

TEEN BIRTHS

Teen births are detrimental to the well being of young mothers and their babies. Teen mothers tend to come from disadvantaged backgrounds and are more likely to be poor before becoming parents. The economic burden on young women is greater when these births occur outside of marriage. In 1998, 82.6 percent of all births to women under age 20 in Nebraska occurred outside of marriage.

Figure 33
Fertility Rates for Teens Aged 15-19
By Race / Ethnic Origin (1989-1993 vs. 1994-1998)



SOURCE: Nebraska Health and Human Services System, Vital Statistics.

The number of births per 1,000 girls aged 15 to 19 was down in 1994-1998 compared to the previous five-year period in Nebraska for all racial/ethnic groups except Hispanic Americans *(Figure 33)*. The greatest decreases were recorded for African American (-24 percent) and Native American (-19 percent) teens.

Despite these declines, fertility rates for African Americans (100.8) and Native Americans (117.5) were roughly triple the rate for white teens (34.2). The rate for Hispanic Americans (98.2) girls was a little lower than the African American and Native American rates, but 2.9 times the white rate.

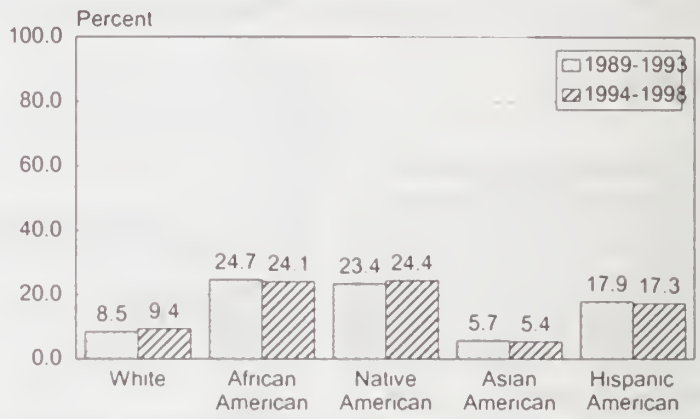
The proportion of all births occurring to teenagers remained fairly stable over the two five-year periods shown in *Figure 34.* Although three-fourths of all teen births in Nebraska occurred among white adolescents in 1994-1998, births to teenagers made up a greater percentage of total births for racial/ethnic minority groups.

Nearly one-fourth of all births to African Americans (24.1 percent) and Native Americans (24.4 percent) occurred to females under age twenty. Among Hispanic American mothers, 17.3 percent were to adolescents aged 15 to 19. In comparison, only 9.4 percent of white births and 5.4 percent of Asian American births occurred to teenagers.

A recent study reported in the New England Journal of Medicine found that being a young mother may, by itself, be a risk factor for premature delivery. In previous studies, experts speculated that because teen mothers are often poor, not well educated or from racial minorities, their living conditions—not their age accounted for their poor pregnancy outcomes. This research attempted to control for these conditions by studying only white middle-class teenagers. Results showed that young maternal age itself is a significant risk factor for poor outcomes, not just when combined with adverse environmental factors. Based on this study, population subgroups that have a high proportion of births to teenage mothers might be expected to also have higher rates of premature/LBW births.

Figure 34

Teen Births* as a Percent of Total Births
By Race / Ethnic Origin (1989-1993 vs. 1994-1998)



*Births to females aged 15-19.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

In Nebraska, teen birth rates for African Americans, Native Americans and Hispanic Americans were all higher than the average for the state, but only African Americans experienced a much higher rate of low-weight births.

LACK OF PRENATAL CARE

The Institute of Medicine reports that every dollar spent on prenatal care for low-income women saves about three dollars in medical expenses for low birth weight infants during their first year of life. Babies whose mothers received no prenatal care are three times more likely to die during infancy. Prenatal care is especially important when other risk factors such as diabetes or hypertension are present in the mother.

For many pregnant women, prenatal care is inaccessible because of the cost of such care. The working poor are especially vulnerable because their incomes may be too high to allow eligibility for Medicaid, yet their private insurance may not provide maternity coverage.

Mothers who initiated prenatal care after the first trimester of pregnancy and those who received no prenatal care at all are considered at risk. Nebraska mothers who are members of racial and ethnic minorities are less likely than white mothers to receive first trimester prenatal care, although improvement was noted for each racial and ethnic group in Nebraska *(Figure 35, Table 17)*.

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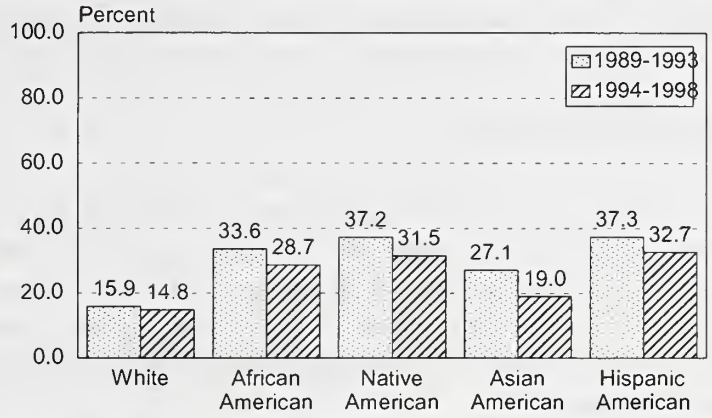
Although the proportion of mothers who did not receive first trimester prenatal care decreased by 12 percent from the previous five-year period, Hispanic American mothers experienced the highest percentage of mothers not receiving first trimester care (32.7 percent) in 1994-1998. They were 2.2 times as likely as white mothers in Nebraska to receive no prenatal care at all or care which began after the first three months of pregnancy.

Figure 35

Percent of Mothers Not Receiving First Trimester Prenatal Care*



*Includes mothers who received no prenatal care.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

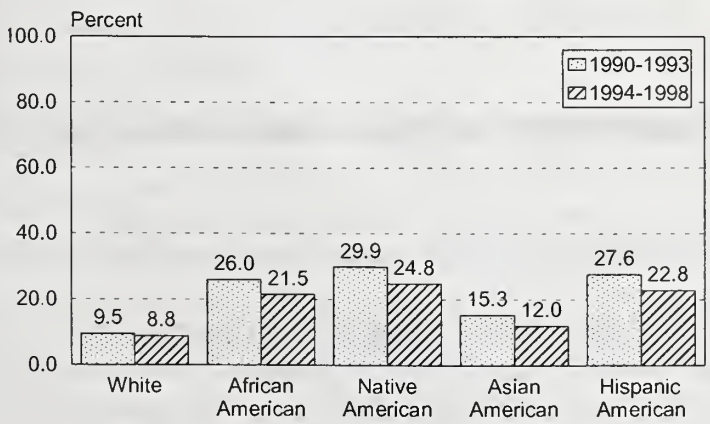
Native Americans (-15 percent) and African Americans (-15 percent) experienced similar improvements in proportion of mothers not receiving first trimester care. However, rates for these mothers were still about twice as high as the rate for white mothers in the state. Nearly one-third of Native American (31.5 percent) and 28.7 percent of African American mothers giving birth in 1994-1998 had not gotten prenatal care beginning in the first trimester of pregnancy.

Among Asian American mothers, 19.0 percent had not received first trimester prenatal care in 1994-1998. This rate represents a 30 percent improvement from the previous five-year period. Among white mothers, the current rate (14.8 percent) also had decreased but by only 7 percent.

In the five-year period, 1994-1998, the Kotelchuk Index was applied in measuring adequacy of prenatal care by using a combination of number of prenatal visits, gestation, and when trimester prenatal care was started. As with first trimester care data discussed above, Kotelchuk Index scores also reveal decreases in the percentage of Nebraska mothers in all racial/ethnic groups who received inadequate prenatal care *(Figure 36)*.

Figure 36

Percent of Mothers Receiving Inadequate Prenatal Care (Kotelchuk Index)



SOURCE: Nebraska Health and Human Services System, Vital Statistics.

Using these data, about 8.8 percent of white mothers in 1994-1998 received inadequate care, which was a slight improvement from the previous five years.

Although the gap between inadequate prenatal care rates for racial/ethnic minority mothers and whites narrowed, the proportion of minority mothers was still much higher. Among Native Americans, 24.8 percent received inadequate prenatal care, as did 22.8 percent of Hispanic mothers and 21.5 percent of African American mothers. The proportion of Asian American mothers who did not receive adequate care was about half as large as that for other minority groups, but 1.4 times the white rate.

SUBSTANCE ABUSE

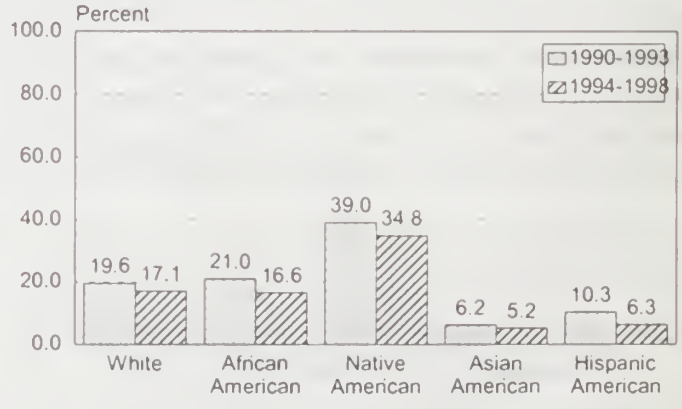
Poor pregnancy outcomes often result from maternal smoking, consumption of alcohol, or use of illicit drugs. Smoking during pregnancy doubles the risk of having a low birth weight infant and is a contributing factor in 20 to 40 percent of all low birth weight infants born in the United States.

In Nebraska, information on tobacco use during pregnancy has been collected on birth certificates since 1990. Native Americans (34.8 percent) were twice as likely as whites (17.1 percent) to use tobacco during pregnancy *(Figure 37)*.

The proportion of African American women who smoked during pregnancy (16.6 percent) was about equal to the white rate. Only 6.3 percent of Hispanic American mothers and 5.2 percent of Asian American mothers in 1994-1998 reported smoking during pregnancy. Reported prevalence of smoking during pregnancy decreased from 1990-1993 to 1994-1998 for all racial/ethnic groups.

Figure 37

% of Mothers Who Reported Smoking During Pregnancy by Race / Ethnicity



SOURCE Nebraska Health and Human Services System, Vital Statistics

Heavy alcohol consumption during pregnancy is associated with fetal alcohol syndrome (FAS), which is characterized by growth retardation, facial malformations and central nervous system dysfunctions including mental retardation. This birth defect is preventable. National data show that one of every 29 women who know they are pregnant report drinking 7 or more drinks per week, or 5 or more drinks on any one occasion. One in eight women of childbearing age reports drinking that could harm her baby even before she knows she is pregnant.

Data from Nebraska Pregnancy Nutrition Surveillance System (PNSS) indicates that 0.6 percent of women participating in the WIC program in the state reported drinking during pregnancy in 1999, compared to 1.89 percent nationwide. These percentages should be viewed with caution, since alcohol use, particularly during pregnancy, is likely to be under-reported.

PROGRESS TOWARD OBJECTIVES

Based on five-year averages, the 1994-1998 infant mortality rates for Native Americans in Nebraska *(Table 18)* declined by nearly 60 percent compared to the baseline. The 1994-1998 rate of 8.3 achieves the Nebraska Year 2000 objective of no more than 15.0 infant deaths per 1,000 live births. It is also lower than the current national infant mortality rate for Native Americans (10.9) and the national Year 2000 objective of 8.5 for this group.

Examining post-neonatal death rates for Native Americans, progress has not been as dramatic, with the rate declining by 29.8 percent from the baseline. To meet the Nebraska objective of no more than 5.0 deaths per 1,000 live births, an additional reduction in the current post-neonatal mortality rate (6.6) of nearly one-fourth would be required.

Table 18
Maternal and Child Health
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1998	% Change Current vs. Baseline	National Year 2000 Objective
Infant deaths/ 1,000 live births								
African Americans	19.5	15.5	-20.5	11.0	17.9	12.8	-28.5	11.0
Native Americans	20.7	8.3	-59.9	15.0	12.5	10.9	-12.8	8.5
Post-neonatal deaths/ 1,000 live births								
African Americans	8.0	5.2	-35.0	5.0	6.1	4.4	-27.9	4.0
Native Americans	9.4	6.6	-29.8	5.0	6.5	4.4	-32.3	4.0
Infants diagnosed with fetal alcohol syndrome/1,000 live births								
African Americans	0.5	0.6	20.0	0.2	0.8	5.4	575.0	0.4
Native Americans	1.4	0.6	-57.1	0.4	4.0	5.2	30.0	2.0
Low birth weight infants/ 1,000 live births								
African American	126.0	120.0	-4.8	60.0	127.0	132.0	3.9	90.0
Percent of mothers receiving first trimester prenatal care								
African Americans	64.9	71.0	9.4	85.0	60.8	73.3	20.6	90.0
Native Americans	57.2	64.8	13.3	85.0	57.6	68.8	19.4	90.0
Hispanic Americans	65.1	65.7	0.9	85.0	61.0	74.3	21.8	90.0
Births among adolescents age 15 to 19 per 1,000 population								
African Americans	126.2	100.8	-20.1	100.0	85.0	88.2	3.8	NG
Hispanic Americans	129.7	98.2	-24.3	100.0	80.0	93.6	17.0	NG

NG = No Goal Targeted

NOTE: Infant mortality data for Native Americans - baseline, 1994. Baseline for births among adolescents has been revised, 1990 data.

SOURCES: Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
National - Healthy People 2000 Review, 1998-99. National Vital Statistics System. Fetal alcohol syndrome data - Birth Defects Monitoring Prograr
CDC. Current rates: African American - 1993; Native American - 1990.

For African Americans in the state, the 1994-1998 infant mortality rate declined by 20.5 percent from the baseline. A further reduction of 29 percent would be needed to meet the Nebraska Year 2000 objective of no more than 11.0 infant deaths per 1,000 live births.

The post-neonatal mortality rate for African Americans (5.2 deaths per 1,000 live births) fell below the baseline of 8.0, nearly achieving the Nebraska Year 2000 objective of 5.0 deaths per 1,000 live births. To meet it, the current rate would need to continue to decrease by about 4 percent.

While the rate of fetal alcohol syndrome (FAS) among Nebraska babies is lower than the national average, this condition is often under-reported. In addition, fetal alcohol syndrome and fetal alcohol effects (a less severe condition resulting from alcohol consumption during pregnancy) are frequently not diagnosed in infancy and would therefore not be recorded in the state's birth defects registry.

Nationally, the rate of FAS among Native Americans is 33 times higher than the rate for whites. In Nebraska, the FAS rate for both African and Native Americans was 0.6 per 1,000 live births for 1994-1998. This appears to be a relative decrease in incidence of this birth defect among Native Americans.

Little progress has been made in reducing the rate of low birth weight babies among African Americans in Nebraska, with the low birth weight rate decreasing by only 4.8 percent from the 1984-1988 baseline. A reduction of 50 percent in the current rate would be necessary to achieve the Nebraska Year 2000 objective. Nevertheless, the Nebraska rate is somewhat lower than the national current rate of 132 of LBW per 1,000 live births.

Compared to Nebraska baseline rates, 1994-1998 first trimester prenatal care rates for Native Americans (64.8 percent) and African Americans (71.0 percent) have increased. For Hispanic Americans, the current rate (65.7 percent) is only slightly higher than the baseline. Despite the improvements for Native Americans and African Americans, rates for all three minority groups are still well below the Nebraska Year 2000 objective of at least 85 percent receiving first trimester prenatal care.

Another area targeted for intervention is to reduce the number of births among adolescent girls. In Nebraska, among teens ages 15-19, Hispanic Americans recorded the highest number of births (1,557), accounting for 17.2 percent of all births among Hispanics and 12.9 percent of the total births in Nebraska among teens in this age bracket.

African American teens of this age group ranked second in the number of teen births with a total of 1,486 (24.0 percent of all births among this racial group in Nebraska and 12.3 percent of the total births among this age group).

Progress has been made in reducing the teen birth rate among African American (100.8 per 1,000 live births) and Hispanic American (98.2 per 1,000 live births) teenagers aged 15 to 19. The birth rate for Hispanic teens declined enough to meet the state's year 2000 objectives of 100.0 The African American adolescent birth rate nearly achieved the 2000 target, with a further reduction of less than one percent needed to reach this objective.

Unintentional Injuries

Unintentional injuries are the fifth leading cause of death in the United States and in Nebraska. There were 97,835 deaths due to these injuries nationwide in 1998, down 7 percent from 1980. Since injury victims are generally younger than persons dying from other leading causes of death (such as heart disease or cancer), the number of potential years of life lost due to injuries is very high. In 1995, there were about 2 million years of potential life lost before age 65 due to unintentional injuries, surpassing both heart disease and cancer. In addition, millions of people are incapacitated by nonfatal injuries and suffer lifelong disabilities.

Motor vehicle fatalities account for about half of all unintentional injury deaths in the U.S. and in Nebraska. In Nebraska, in 1998, a total of 674 deaths resulted from unintentional injuries, with 414 of those being males and 260 females. Of all deaths resulting from unintentional injuries in 1998 in Nebraska, motor vehicles were responsible for the deaths of 345 Nebraskans (51 percent).

CURRENT RATES

DEATHS DUE TO UNINTENTIONAL INJURIES

Nationally, the 1998 death rate due to unintentional injuries for Native Americans is nearly double the rate for the white population. African Americans also experienced a higher rate of deaths due to unintentional injuries, with 1.2 times the risk of death from unintentional injuries recorded for white Americans. Hispanic Americans were only slightly less likely, and Asian Americans were about half as likely as whites to die from these injuries.

Although unintentional injuries were the fourth leading cause of death for white Nebraskans, they ranked third among Native Americans and Hispanic Americans for the period 1994-1998.

The unintentional injury death rate for Native Americans in Nebraska was 8 percent lower in 1994-1998 than in the previous five-year period *(Table 19, Figure 38).* However, the death rate (76.8) is still more than twice as high as the rate for whites.

Table 19
Unintentional Injuries
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Unintentional Injuries								
White	35.7				36.0			
African American	31.5	0.9	0.7	1.2	30.3	0.8	0.9	0.8
Native American	83.9	2.4	2.5	2.4	76.8	2.1	2.2	2.0
Asian American	15.2	0.4	0.5	**	14.9	0.4	**	0.8
Hispanic American	37.9	1.1	1.1	0.8	33.8	0.9	1	0.7
Motor Vehicle Fatalities								
White	17.8				17.7			
African American	14.3	0.8	0.7	0.9	12.6	0.7	0.7	0.8
Native American	35.9	2.0	1.6	2.7	34.1	1.9	1.8	2.3
Asian American	7.0	0.4	**	**	6.3	0.4	**	**
Hispanic American	23.2	1.3	1.5	0.8	20.0	1.1	1.2	0.8

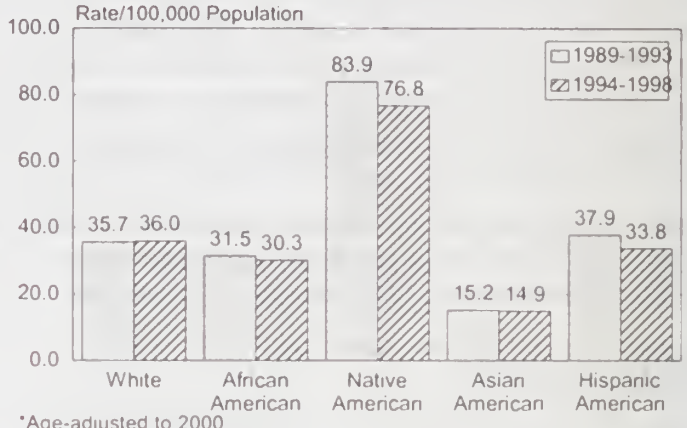
*Age-adjusted to 2000.
**Fewer than five deaths during the five-year period.
SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

Hispanic Nebraskans also experienced a slight decrease in mortality due to unintentional injuries in the last five-year period. The latest rate (33.8) is .9 times the comparable rate for whites in the state.

African Americans (30.3) in Nebraska showed a lower rate than that for whites (36.0). The African American rate also decreased slightly from the last five-year period (31.5). The Asian American mortality rate due to unintentional injuries was 0.4 times the white rate.

Figure 38

Unintentional Injury Mortality Rates* By Race and Ethnic Origin



*Age-adjusted to 2000
SOURCE Nebraska Health and Human Services System, Vital Statistics

YEARS OF POTENTIAL LIFE LOST (YPLL) TO UNINTENTIONAL INJURIES

Overall, an average of 2,707 years of potential life were lost each year in the five-year period 1994-1998 due to unintentional injuries among Nebraska's racial and ethnic minority populations *(Table 20)*. Native Americans lost three times as many and Hispanic Americans lost 1.4 times as many YPLL per person as whites. On the other hand, white Nebraskans lost more YPLL per person from unintentional injuries than African Americans or Asian Americans.

Table 20
Years of Potential Life Lost -- Unintentional Injuries
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Unintentional Injuries						
White	74,414	989.6		73,034	949.4	
African American	3,074	895.6	0.9	2,926	829.5	0.9
Native American	1,991	2,748.9	2.8	2,245	2,865.4	3.0
Asian American	409	537.4	0.5	294	299.0	0.3
Hispanic American	3,562	1,425.3	1.4	5,361	1,351.1	1.4
Average/Year (Minorities)	2,259			2,707		
Motor Vehicle Fatalities						
White	48,520	644.7		48,538	628.8	
African American	1,402	423.3	0.7	1,580	442.6	0.7
Native American	1,156	1,512.8	2.3	1,062	1,297.6	2.1
Asian American	248	306.1	0.5	243	218.1	0.3
Hispanic American	2,326	935.8	1.5	3,633	902.5	1.4
Average/Year (Minorities)	1,283			1,630		

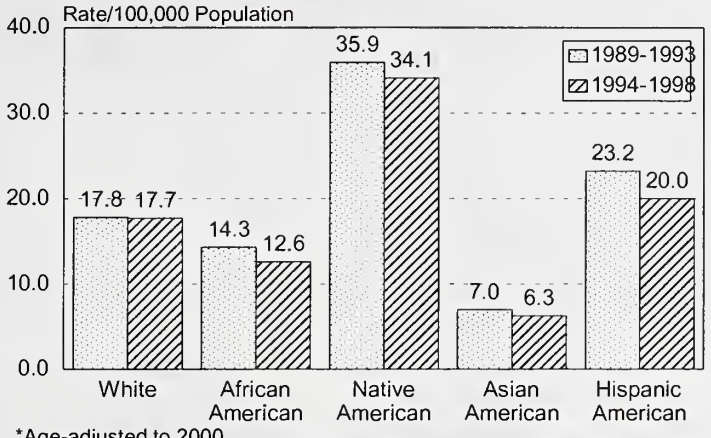
*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

MOTOR VEHICLE FATALITY RATES

Compared to the previous five-year period, current rates for each racial/ethnic group showed decreases in motor vehicle fatality rates, although the decline was extremely small for whites *(Figure 39)*. Despite these decreases, rates for Native Americans were nearly double the rate for white residents.

Figure 39

Motor Vehicle Fatality Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

YEARS OF POTENTIAL LIFE LOST (YPLL) TO MOTOR VEHICLE CRASHES

In 1994-1998, an estimated 1,630 years of potential life were lost due to motor vehicle fatalities among racial and ethnic minority residents of Nebraska each year. Native Americans and Hispanic Nebraskans accounted for 72 percent of the total years lost. There were twice as many years of life lost per person for Native Americans and 1.4 times as many for Hispanic Americans as for white Nebraskans.

RISK FACTORS

SUBSTANCE ABUSE

Alcohol use is closely related to the causes and severity of many unintentional injuries. Studies have shown that alcohol is linked to 27 to 47 percent of drownings and between 17 and 53 percent of all falls. Between 48 to 67 percent of people dying in fires were found to have blood alcohol levels indicating intoxication.

The Nebraska Highway Safety section of the Department of Roads estimates that 41.2 percent of all fatal motor vehicle crashes in Nebraska in 1999 involved alcohol. Teenagers and young adults account for a disproportionate share of alcohol-related traffic fatalities.

The 1993 Nebraska BRFSS found that, overall, four percent of adult Nebraskans reported drinking and driving. Data are unavailable by race or ethnic origin of respondents.

NONUSE OF SEATBELTS

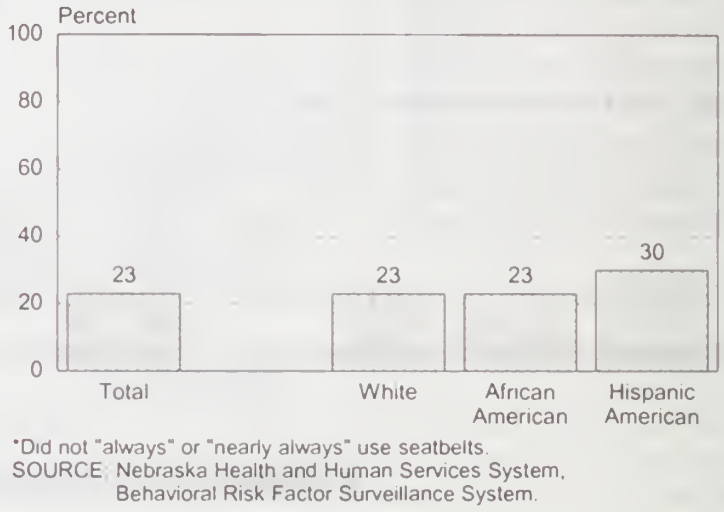
The effectiveness of seatbelts in preventing injury and death in motor vehicles is well documented. When used properly, it is estimated that safety belts can reduce motor vehicle fatalities by 40 to 50 percent. The 1993 Nebraska BRFSS found that, since the advent of Nebraska's seatbelt law in January 1993, 77 percent of adults "always" or "nearly always" use safety belts when driving or riding in a motor vehicle. This leaves nearly one-fourth (23 percent) who are at risk due to nonuse of these safety restraints.

Results of the combined Nebraska BRFSS for 1993, 1995 and 1997 show that 23 percent each of whites and African Americans aged 18 years and older reported they did not "always" or "nearly always" use seatbelts *(Figure 40)*. Hispanic Americans were more likely than whites or African Americans in the state to be at risk for nonuse of seatbelts (30 percent).

Figure 40

Nonuse* of Seatbelts in Nebraska

Adults Aged 18 + (1993,1995,1997 Combined)



*Did not "always" or "nearly always" use seatbelts.
SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

The number of survey respondents was not large enough for Native Americans and Asian Americans to allow data to be statistically analyzed for these groups.

PROGRESS TOWARD OBJECTIVES

The mortality rate due to unintentional injuries for African American men was 34.7 in 1994-1998 *(Table 21)*. This rate was down by more than 40 percent from the 1984-1988 baseline rate of 58.5 deaths per 100,000 population, thus achieving the Nebraska objective for year 2000.

For Native Americans, the mortality rate for this cause decreased considerably (-45.8 percent) to 77.9 deaths per 100,000 in 1994-1998, compared to 143.7 in 1993-1998. However, the current rate did not drop enough to meet the year 2000 objective for the state of no more than 60.0 deaths due to unintentional injuries among Native Americans. A further reduction of about 23 percent in the current rate would achieve the target rate for this group.

The unintentional injury death rate for Hispanic men decreased by a much smaller percentage, resulting in a 1994-1998 rate of 52.7. This rate would need to decline by 18 percent to reach the Nebraska year 2000 objective. Motor vehicle fatality rates for Native Americans in Nebraska were down significantly from the 1984-1998 baseline of 60.3 deaths per 100,000 population. The current rate of 36.6 achieved the Nebraska objective of no more than 50.0 deaths per 100,000 due to motor vehicle crashes for Native Americans.

Table 21
Unintentional Injuries
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Deaths due to unintentional injuries /100,000 population								
African American men	58.5	34.7	-40.7	50.0	68.0	55.7	-18.1	51.9
Native Americans	143.7	77.9	-45.8	60.0	66.0	57.6	-12.7	53.0
Hispanic American men	56.2	52.7	-6.2	43.0	53.3	45.4	-14.8	43.0
Deaths due to motor vehicle crashes /100,000 population								
Native Americans	60.3	36.6	-39.3	50.0	37.7	34.0	-9.8	32.0

*Age-adjusted to 1940 standard.
NOTE: National data for Hispanic American men includes only Mexican American men.

SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
Healthy People 2000 Review, 1998-99, National Vital Statistics System.

Violent and Abusive Behavior

OVERVIEW OF HEALTH IMPACT

Violent and abusive behaviors include suicide, homicide, weapon-related deaths and injuries, child abuse, rape, assaults and domestic violence. The control of these behaviors has generally been the responsibility of law enforcement and social service agencies. However, with the number of victims rising and now exceeding 2 million Americans each year, violence has become a public health as well as a social problem.

According to the Nebraska Commission on Law Enforcement and Criminal Justice, violent crimes are defined in Nebraska as murders, rape, felony assaults, and robberies. Nebraska had a total of 71,901 crimes reported or known to law enforcement agencies in 1998. Violent crimes accounted for 10.3 percent of this total for a rate of 4.4 crimes per 1,000 population.

CURRENT RATES

HOMICIDE RATES

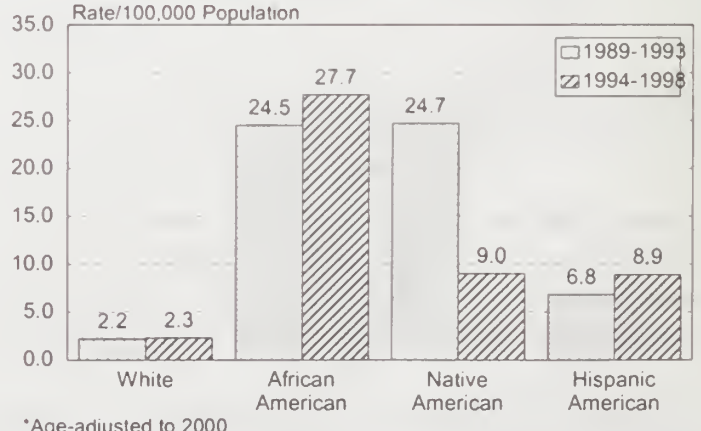
Homicide resulted in the deaths of 17,350 Americans in 1998, at the rate of 7.3 deaths per 100,000 population, thus ranking thirteenth among the leading causes of death. The homicide rate has been on the decrease since 1990 when the rate was 10.2

There were 55 homicides in Nebraska in 1998. The Nebraska homicide rate (3.5) was less than half the national rate (7.3) in 1998. As reported nationally, males and young adults were more likely than other persons to become homicide victims.

In 1998, homicides did not appear among the top 15 causes of death for the overall population of Nebraska. Homicides were the fourth leading cause of death for African Americans in Nebraska in 1994-1998. This cause accounted for 100 deaths over the last five years and resulted in a rate of 27.7 per 100,000 population for this group *(Figure 41)*.

Figure 41

Homicide Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

The current homicide rate is up slightly from the 1989-1993 rate of 24.5. The relative risk of death from homicide in Nebraska for African Americans is 12.0 times the risk for whites *(Table 22)*. The disparity between rates is even greater for African American males, where the homicide rates were 15.0 times as high as the rate for white males.

Table 22
Violent and Abusive Behavior
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Homicides								
White	2.2				2.3			
African American	24.5	11.1	15.0	5.8	27.7	12.0	15.0	4.9
Native American	24.7	11.2	16.3	**	9.0	3.9	3.2	**
Hispanic American	3.1	1.4	3.0	**	8.9	3.9	3.9	3.1
Suicides								
White	12.1				11.5			
African American	9.8	0.8	0.9	**	8.2	0.7	0.7	**
Native American	8.4	0.7	0.7	**	10.6	0.9	0.9	**
Hispanic American	6.4	0.5	0.5	**	7.0	0.6	0.6	**

*Age-adjusted to 2000.
**Fewer than five deaths during the five-year period.
SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

There were 8 deaths due to homicide among Native Americans in Nebraska in 1994-1998, making this the eleventh leading cause of death for that group. Native Americans in the state were 3.9 times as likely as white Nebraskans to die as a result of homicide. However, the homicide rate per 100,000 population for this group has dropped from 24.7 in 1989-1993 to 9.0 in 1994-1998. The relative risk of death (3.9) from homicides for Native Americans in Nebraska has also shown substantial improvement, compared to 11.2 in the previous five-year period.

Among Hispanic Nebraskans, in the five-year period 1994-1998, there were 33 homicides, making it the sixth leading cause of death. The homicide rate per 100,000 population increased from 3.1 in 1989-1993 to 8.9 or approximately four times the rate for white Nebraskans.

Although most of the increased risk for homicide death occurs within the male population, homicide rates for females are also substantially higher among some racial and ethnic minority populations than among whites in Nebraska. For 1994-1998, African American females were 4.9 times and Hispanic American females were 3.1 times more likely than white females to be homicide victims.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO HOMICIDE

Since homicide victims are frequently young, the number of years of potential life lost due to this cause is significant. Among racial and ethnic minority residents of Nebraska, there was an average of 1,746 years of life lost each year during 1994-1998. African Americans accounted for about two-thirds of the total while Hispanic Americans accounted for 24 percent *(Table 23)*.

Table 23
Years of Potential Life Lost – Homicide and Suicide
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Homicides						
White	7,439	97.6		7,969	103.9	
African American	3,664	1,062.6	10.9	4,794	1,263.1	12.2
Native American	784	993.9	10.2	423	458.9	4.4
Asian American	157	152.5	1.6	91	64.9	0.6
Hispanic American	659	250.8	2.6	1,677	417.1	4.0
Average/Year (Minorities)	1,316			1,746		
Suicides						
White	27,811	376.6		27,957	364.9	
African American	1,194	352.6	0.9	1,129	315.3	0.9
Native American	369	438.2	1.2	440	503.5	1.4
Asian American	111	109.1	0.3	182	142.3	0.4
Hispanic American	516	241.1	0.6	1,112	303.6	0.8
Average/Year (Minorities)	548			716		

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

The number of YPLL per person was slightly more than 12 times as high for African Americans as for whites in Nebraska. Native Americans averaged 4.4 times as many YPLL per person, while Hispanic Nebraskans averaged 4.0 times as many years of potential life lost per person compared to the white population.

SUICIDE RATES

Nationwide, suicide was the eight leading cause of death for the total population, accounting for 30,575 deaths in 1998. This is a rate of 10.4 deaths per 100,000 population. Suicide was the third leading cause of death among youths ages 15-24. More people die from suicide than from homicide - at a rate as high as 1.5 times the rate for homicides. American males are four times more likely to die from suicide than females. Nevertheless, females are more likely to attempt suicide than men.

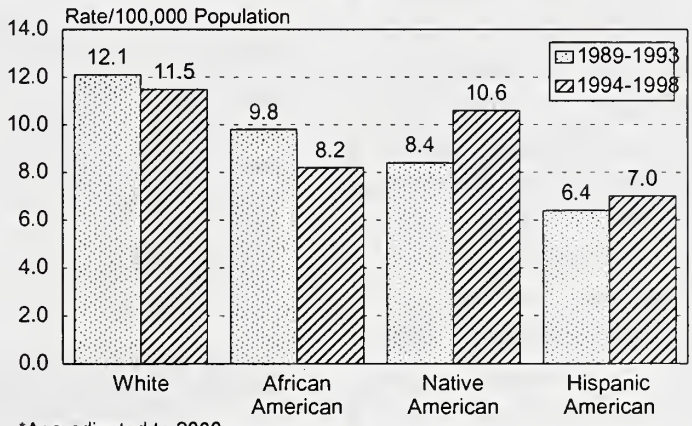
In Nebraska, suicide rates have remained fairly stable over the past ten years. Suicide was the tenth leading cause of death in Nebraska, accounting for 201 deaths in 1998.

More than 80 percent of suicide victims in the state were males during the period 1994-1998. Suicide was the second leading cause of death for Nebraska males aged 15 to 29 with 42 deaths in 1998, and the third leading cause for men aged 30 to 44, accounting for 56 such deaths in the same year.

Based on 1994-1998 mortality data, each racial/ethnic minority group in Nebraska, including Native Americans, had a lower risk of suicide death than whites, although rates were not much lower for Native Americans *(Figure 42)*.

Figure 42

Suicide Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO SUICIDE

An average of 716 years of potential life were lost annually due to suicide among racial and ethnic minority populations in Nebraska over the last five-year period *(Table 23)*. The number of years lost per person was 1.4 times as high for Native Americans as for white residents of Nebraska.

SUBSTANCE ABUSE

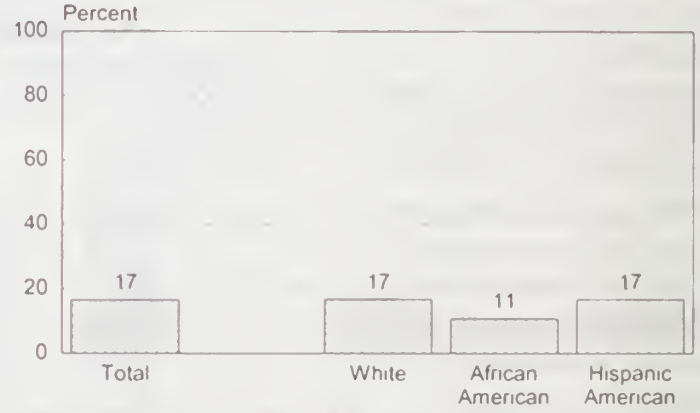
Alcohol use precedes or accompanies one-third to two-thirds of all homicides and serious assaults. A similar review of studies showed that up to about one-third of suicide victims had a history of alcohol use or were drinking before their suicides.

According to the Nebraska Behavioral Risk Factor Surveillance System, 17 percent of adult Nebraskans participated in binge drinking (consuming five or more alcoholic drinks on one occasion). Survey results indicate that 17 percent of white Nebraskans, 17 percent of Hispanic Americans and 11 percent of African Americans engaged in binge drinking during the thirty days preceding the survey (*Figure 43).* Sufficient information for analysis was not available for Native Americans or Asian Americans.

Figure 43

Prevalence of Binge Drinking* in Nebraska

Adults Aged 18 + (1992-1998)



*Consumed 5 or more alcoholic drinks on an occasion in the past 30 days

SOURCE Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System

ACCESS TO FIREARMS

Ready access to firearms also increases the risk of suicide and homicide. In 1998, the Federal Bureau of Investigation concluded that 670,500 victims of violent crimes – rapes, sexual assaults, robbery and aggravated assault — faced a perpetrator with a firearm. Also, of the nearly 17,000 murders committed in the U.S. in 1998, 65 percent of them involved the use of firearms. Many experts consider immediate access to a firearm or other lethal weapon to be the deciding factor in turning a violent event into a homicide.

Improper use of firearms caused 32,436 deaths among Americans in 1997 at the rate of 12.2 deaths per 100,000 population. Of all these deaths, only about 5 percent were the result of unintentional injuries. Suicides accounted for 48 percent and homicides 47 percent of total firearm injury deaths.

POVERTY

Although racial/ethnic minority status is associated with rates of violent crime that exceed rates for whites in the United States, studies generally show that poverty (which is often more prevalent among racial and ethnic minority groups) is a more significant risk factor than race or ethnic origin for becoming a victim of violent crime or committing one.

PROGRESS TOWARD OBJECTIVES

HOMICIDES

Substantial progress has been made in Nebraska in reducing homicide rates among young African Americans and Hispanic men (aged 15 to 34 years) and among Native Americans in general *(Table 24)*.

Compared to the 1984-1988 baseline, homicides among African American men aged 15 to 34 were down 50 percent in 1994-1998. The current Nebraska rate of 37.4 deaths per 100,000 population was less than half the national rate for this group and meets the Nebraska Year 2000 objective of no more than 60.0 homicide deaths per 100,000 population.

For African American women in this age bracket, the homicide rate decreased by nearly three-fourths from the 1984-1988 baseline, declining to 5.6 deaths per 100,000 in Nebraska. This rate is about one-third the national rate and also achieves the Nebraska objective for 2000 of no more than 16.0 homicide deaths per 100,000.

Hispanic American men aged 15-34 also experienced a sharp drop (-57.4 percent) in homicide rates compared to the Nebraska baseline. The 1994-1988 rate (11.0 deaths per 100,000) is less than one-third the national rate and has declined enough to attain the state's target rate for 2000 (20.0).

The 1994-1998 homicide rate for Native Americans in Nebraska decreased by 66.7 percent compared to the baseline rate. The current Nebraska rate for this population group (10.6) is 6.6 percent higher than the national rate, and does not meet the state's year 2000 objective of no more than 20.0 homicide deaths per 100,000.

SUICIDES

Native American men in Nebraska and nationwide have been targeted for suicide reductions. The current Nebraska rate (22.0) is higher than the 1996 U.S. rate (20.0). The suicide rate for this group is based on less than ten deaths over a five-year period and a trend is difficult to establish. However, no reduction in suicide rate is evident in the 1994-1998 mortality data but rather an increase of 73.2 percent was recorded. To achieve the Nebraska Year 2000 objective of no more than 11.0 suicide deaths per 100,000, a reduction of 50 percent in the rate would be necessary.

Table 24
Violent and Abusive Behavior
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Deaths due to homicide/100,000 population								
Age 15-34								
African American men	74.8	37.4	-50	60.0	91.1	105.7	16	72.4
Hispanic American men	25.8	11.0	-57.4	20.0	41.3	39.2	-5.1	33.0
African American women	19.7	5.6	-71.6	16.0	20.2	16.1	-20.3	16.0
All ages*								
Native Americans	31.8	10.6	-66.7	20.0	11.2	9.9	-11.6	9.0
Deaths due to suicide/100,000 population								
Native American men*	12.7	22	73.2	11.0	20.1	20.0	-0.5	17.0

*Age-adjusted to 1940 standard.

SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
Healthy People 2000 Review, 1998-99, National Vital Statistics System.

DIABETES

OVERVIEW OF HEALTH IMPACT

Diabetes mellitus is a disease resulting from a lack of sufficient insulin (a hormone produced by the pancreas) or the body's inability to use insulin effectively. Diabetes was the seventh leading cause of death in the U.S. in 1997, causing about 62,636 deaths. Approximately 16 million people in the United States currently have diabetes, although many of them (about one-third) may be unaware they have this disease. Only about 10 million have actually been diagnosed. Each year, approximately 798,000 new cases of diabetes are identified in the United States with about 13.5 deaths per 100,000 population.

As of 1996, an estimated 66,812 Nebraskans were diagnosed with diabetes and were aware of their condition. A similar number are thought to have diabetes but have not been diagnosed.

Diabetes often results not only in a shortened life span, but also an increased probability of disabilities due to complications such as kidney disease, blindness, or lower extremity amputations. However, these complications can often be delayed or prevented by applying improved treatment techniques and procedures, along with a change in lifestyle.

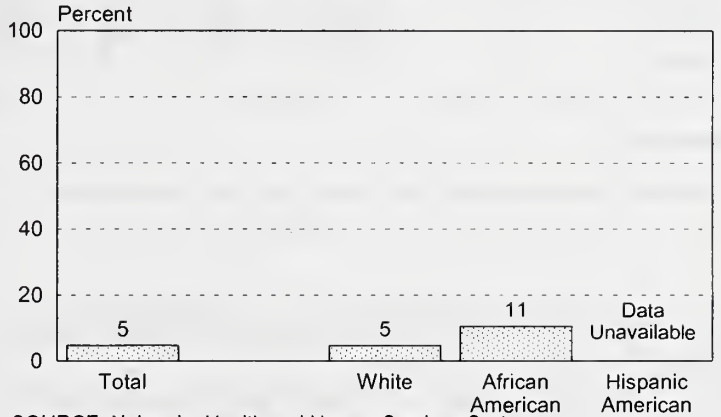
Cardiovascular disease is the leading cause of death for persons with diabetes, accounting for more than half of all deaths among this group nationally. Persons with diabetes are six to ten times more likely to be hospitalized for heart disease or stroke than persons who do not have diabetes. Persons with diabetes who also smoke, have high blood pressure or elevated blood cholesterol levels, or are overweight, are at increased risk of stroke or heart disease.

When deaths from diabetes as the underlying cause of death are considered, this disease ranks seventh overall in Nebraska. Based on the number of deaths in Nebraska between 1994-1998, diabetes-related deaths ranked fourth for Hispanic Americans and fifth for Native Americans and African Americans in the state, with a rank of seventh for whites. Fewer than five deaths from diabetes were reported for Asian Americans in Nebraska during this five-year period, so no ranking was assigned.

PREVALANCE OF DIABETES

National data indicate greater prevalence of diabetes among Native Americans, Hispanic Americans, and African Americans than among white Americans. According to the American Diabetes Association, 5.2 percent of the general population has Type II diabetes. Current estimates show that 10.6 percent of Mexican Americans and 10.8 percent of African Americans have this form of diabetes. Among Native Americans, overall prevalence of Type II diabetes is 12.2 percent; however, in some tribes 50 percent of the population have diabetes.

Figure 44
Ever Told by Doctor They Have Diabetes
Nebraskans Aged 18 + (1994-1998)

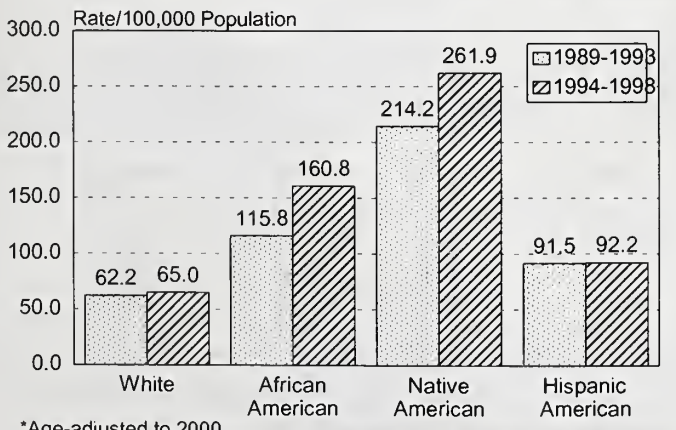


SOURCE: Nebraska Health and Human Services System, Behavioral Risk Factor Surveillance System.

In Nebraska, five percent of adults stated they have ever been told by a doctor that they have diabetes, according to the 1994-1998 BRFSS. Based on responses to the Nebraska Behavioral Risk Factor Surveillance System, reported prevalence of diabetes among racial and ethnic minority populations in Nebraska varies *(Figure 44)*.

African Americans (11 percent) were far more likely than white Nebraskans (5 percent) to indicate they had ever been told by a doctor that they have diabetes. There were too few respondents from other racial/ethnic minority groups to allow determination of diabetes prevalence.

Figure 45
Diabetes-Related Mortality Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

CURRENT RATES

DEATHS DUE TO DIABETES-RELATED CAUSES

Overall, the diabetes-related death rate in Nebraska increased by 6 percent to 67.5 deaths per 100,000 population for 1994-1998, compared to 1989-1993.

Native Americans experienced a 22.3 percent increase and by far the highest rate of diabetes-related deaths (261.9) of any racial or ethnic group in Nebraska when compared to the 1989-1993 rate of 214.2 per 100,000 population *(Figure 45, Table 25)*.

Table 25
Diabetes-Related Causes
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Diabetes-Related Causes								
White	62.2				65.0			
African American	115.8	1.9	1.5	2.2	160.8	2.5	2.1	2.8
Native American	214.2	3.4	2.2	4.6	261.9	4.0	4.0	4.1
Hispanic American	91.5	1.5	1.2	1.7	92.2	1.4	1.2	1.6

*Age-adjusted to 2000.

SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

When compared to white Nebraskans, the 1994-1998 death rate for diabetes-related causes was over four times as high for Native Americans.

Among African Americans in Nebraska, there were 160.8 deaths per 100,000 population in 1994-1998, an increase of 39 percent from the previous five-year period. The diabetes-related death rate for African Americans was 2.5 times as high as the white death rate for this cause.

Hispanic Americans also experienced diabetes-related death rates (92.2) that are high compared to white Nebraskans. However, diabetes-related mortality for this group generally appears to be stable. When compared to white Nebraskans, the 1994-1998 death rate for diabetes-related causes was 1.4 times as great for Hispanic Americans.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO DIABETES-RELATED CAUSES

Table 26
Years of Potential Life Lost – Diabetes-Related Causes
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Diabetes-Related						
White	23,496	322.3		24,038	315.8	
African American	1,494	797.8	2.5	1,832	831.1	2.6
Native American	621	1,748.6	5.4	967	2,306.6	7.3
Asian American	11	45.5	0.1	37	72.5	0.2
Hispanic American	455	431.2	1.3	816	552.8	1.8
Average/Year (Minorities)	645.3			913.0		

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

Together, a total of 3,652 years of potential life, or an average of 913.0 years of potential life annually, were lost due to diabetes-related deaths among racial and ethnic minorities in Nebraska over the last five-year period, 1994-1998. The above average represents an increase of more than 40 percent over the previous five-year period, when the average years of potential life lost were 645.3 years.

The YPLL rate was highest among Native Americans *(Table 26),* who averaged 7.3 times as many years of life lost per person as whites in the state. Native Americans lost a total of 2,306.6 YPLL per 100,000 population compared to 315.8 for whites. African Americans and Hispanic Americans also experienced YPLL rates of 2.6 and 1.8 times higher from this cause than white Nebraskans *(Table 26).*

RISK FACTOR

OVERWEIGHT

The prevention and control of obesity is of major importance in preventing and controlling non-insulin-dependent (Type II) diabetes (NIDDM). Roughly half of all NIDDM cases are thought to be the result of obesity. Since 90 percent of diabetes cases are NIDDM, it is estimated that about 45 percent of all diabetes mellitus cases could be prevented through control of obesity, according to the Centers for Disease Control and Prevention.

The prevalence of overweight has been increasing in Nebraska and nationwide. In Nebraska, 30 percent of adults reported heights and weights that placed them in the overweight category (using the Body Mass Index) in the 1994-1998 BRFSS. This survey found that both African Americans and Hispanic Americans report a higher prevalence of overweight than Nebraskans overall. More than one-third of Hispanic Americans (34 percent) and 43 percent African Americans were classified as overweight. The number of respondents who were Asian Americans or Native Americans was insuffient to determine overweight prevalence for these groups.

PROGRESS TOWARD OBJECTIVES

As shown in Table 27, the Year 2000 objectives for Nebraska and the nation have identified African Americans, Hispanic Americans and Native Americans as target groups for reductions in diabetes mortality. In Nebraska, the rationale for targeting Native Americans is even more compelling, given the fact that diabetes-related deaths for them are considerably in excess of national figures.

Progress toward diabetes-related mortality objectives is difficult to assess because of the relatively small number of deaths from this cause for racial/ethnic minority groups in Nebraska and the resulting variability in mortality rates over time.

The diabetes-related death rate for African Americans actually decreased 2.9 percent to 88.1 per 100,000 population but it is still higher than the 1996 national rate of 76.0. Although the Nebraska objective of 105.0 appears to have been met for the year 2000, to meet the national objective for African Americans, a reduction of 34 percent in this rate would be required.

There is no evidence to suggest that diabetes-related mortality rates for Native Americans (160.4) and Hispanic Americans (53.7) in Nebraska are decreasing. To meet the Nebraska objective, Native American rates must be reduced by about 13 percent. To reach the national Year 2000 objective for this population group, a decrease of about 74 percent in the mortality rate would have had to occur.

For Hispanic Americans, a decrease of approximately 7 percent in the diabetes-related mortality rate would be needed to achieve the National Year 2000 objectives, and about 27 percent to attain the Nebraska objectives.

Since obesity is a risk factor both for development of non-insulin-dependent diabetes mellitus (NIDDM) and for cardiovascular disease (the leading cause of death for persons with diabetes), achievement of the Year 2000 objective seeking to reduce the prevalence of overweight would also aid in lowering diabetes-related death rates. Prevalence of overweight is generally higher among Native Americans, African Americans, and Hispanic Americans than among adult Nebraskans overall. These groups have been targeted for reduction in prevalence of overweight.

Table 27
Diabetes-Related Deaths
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1986	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Deaths due to diabetes-related causes/100,000 population								
African Americans	90.7	88.1	-2.9	105.0	67.0	76.0	13.4	58.0
Native Americans	132.5	160.4	21.1	140.0	46.0	63.0	37.0	41.0
Hispanic Americans	47.2	53.7	13.8	39.0	55.7	60.1	7.9	50.0

NOTE: Mortality data are age-adjusted to the 1940 standard.
National Hispanic American data are for Mexican Americans only. Baseline, 1990 (has been revised).
SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
Healthy People 2000 Review, 1998-99. National Vital Statistics System.

Cirrhosis

OVERVIEW OF HEALTH IMPACT

Cirrhosis of the liver was the tenth leading cause of death nationwide in 1998. In the period, 1994-1998, cirrhosis of the liver was the fifteenth leading cause of death in Nebraska. The disease is largely attributable to heavy alcohol consumption.

The National Institute on Alcohol Abuse and Alcoholism reports that liver cirrhosis mortality in the United States increased steadily following the end of Prohibition in 1933 until 1973. Since then, cirrhosis mortality has declined steadily. Death rates for cirrhosis are much higher among Native Americans and African American males in the United States.

Current rates

DEATHS DUE TO CIRRHOSIS

The mortality rate for cirrhosis of the liver (5.5 deaths per 100,000) in Nebraska, was down by 14 percent in 1994-1998, compared to the previous five years.

Table 28
Cirrhosis of the Liver
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
Cirrhosis								
White	5.6				4.9			
African American	17.7	3.2	2.9	4.0	11.6	2.4	2.2	2.5
Native American	99.5	17.8	11.9	31.4	71.1	14.5	14.7	13.9
Hispanic American	8.7	1.6	1.4	1.8	12.1	2.5	2.0	2.9

*Age-adjusted to 2000.

SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

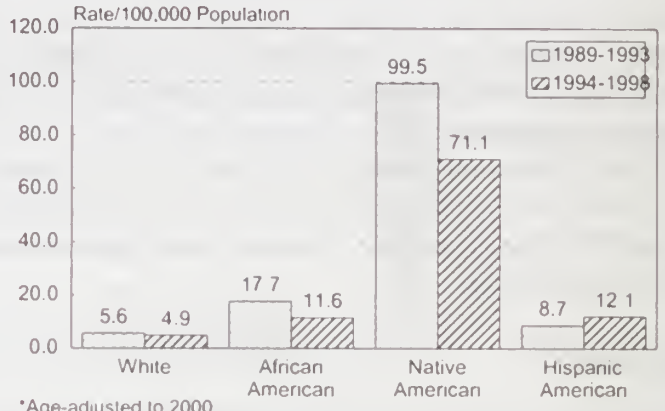
Table 28 presents cirrhosis mortality rates for Nebraska minorities and the relative risk for each group compared to white residents of the state *(Figure 46)*.

Although the cirrhosis death rate has declined by 29 percent since 1989-1993 among Native Americans in Nebraska, the 1994-1998 mortality rate due to cirrhosis (71.1 deaths per 100,000 population) was 14.5 times as high as the rate for whites in the state.

Among the state's African American population, cirrhosis deaths were down by more than one-third from the previous period. However, the 1994-1998 mortality rate (11.6) was still 2.4 times the rate for white Nebraskans.

The cirrhosis mortality rate for Hispanic Americans rose by 39 percent from the previous five-year period to 12.1 deaths per 100,000 population, in 1994-1998. In the latest period, Hispanic Nebraskans were 2.4 times as likely as white residents to die from cirrhosis of the liver.

Figure 46
Cirrhosis Mortality Rates*
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO CIRRHOSIS

Altogether, an estimated 460 years of potential life were lost annually among racial or ethnic minority residents of Nebraska due to cirrhosis of the liver from 1994 through 1998 – a decrease of 13 percent from the previous period *(Table 29)*.

Native Americans accounted for more than half of the total years of potential life lost due to cirrhosis for racial and ethnic minorities. The YPLL rate due to cirrhosis per 100,000 population for Native Americans (1802.4) has decreased, but was still nearly 23 times as high as the rate among white Nebraskans in 1994-1998.

The YPLL rate due to this cause of death for African Americans (213.0) in Nebraska decreased compared to the previous five-year period. The rate of YPLL per 100,000 African Americans was 2.7 times the rate for whites.

The number of potential years of life lost due to cirrhosis per 100,000 population has increased for Hispanic Americans (161.6) in Nebraska, with the YPLL rate 2.0 times the rate for whites.

Table 29
Years of Potential Life Lost – Cirrhosis of the Liver
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
Cirrhosis						
White	5,973	88.3		5,868	78.9	
African American	670	332.5	3.8	478	213.0	2.7
Native American	1,216	2,456.9	27.8	952	1,802.4	22.8
Asian American	0	0.0	0.0	16	30.9	0.4
Hispanic American	225	183.0	2.1	394	161.6	2.0
Average/Year (Minorities)	528			460		

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

RISK FACTORS

SUBSTANCE ABUSE

The risk of cirrhosis mortality increases with the amount of alcohol consumed and the duration of consumption. According to recent estimates, 50 to 90 percent of all cirrhosis deaths are caused by alcohol abuse.

Data on heavy drinking from the 1994-1998 BRFSS are currently unavailable for racial or ethnic minority groups in the state. ("Heavy drinking" is defined as consuming 60 or more alcoholic drinks in the past month).

Binge drinking is defined as consuming five or more alcoholic drinks on one occasion. Seventeen percent of Nebraskans responding to the 1994-1998 BRFSS in the state reported binge drinking during the past month. Among racial and ethnic minorities in the state, eleven percent of African Americans, 17 percent of Native Americans, and 17 percent of Hispanic Americans participated in binge drinking during the thirty days before the survey *(Figure 43).*

PROGRESS TOWARD OBJECTIVES

Special population groups targeted for cirrhosis mortality reductions in Nebraska include African American males, Native Americans, and Hispanic Americans. As shown in Table 28, progress has been made in Nebraska in decreasing cirrhosis mortality among Native Americans (down by 41.2 percent) and to a lesser degree, among Hispanic Americans (-11.3 percent) and African Americans (- 28.8 percent), compared to the 1984-1988 baseline.

Although reductions in cirrhosis mortality rates occurred for all targeted groups, rates were not yet low enough to meet the state's year 2000 objectives. Further reductions in the African American (-21 percent), Native American (-15 percent) and Hispanic American (-20 percent) cirrhosis death rates will be required to meet the Year 2000 objectives.

Table 30
Cirrhosis of the Liver
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1987	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Deaths due to cirrhosis/100,000 population								
African American men	17.7	12.6	-28.8	10.0	22.6	13.8	-38.9	12.0
Native Americans	108.4	63.7	-41.2	54.0	20.5	20.7	1.0	13.0
Hispanic Americans	9.7	8.6	-11.3	6.9	14.2	12.6	-11.3	10.0

NOTE: Mortality data are age-adjusted to the 1940 standard.
National–Baseline data for Hispanic Americans - 1990; has been revised.
SOURCES: Mortality data--Nebraska Vital Statistics, 1984-1988 and 1994-1998, Nebraska Health and Human Services System.
National-- Healthy People 2000 Review, 1998-99. National Vital Statistics System.

SEXUALLY TRANSMITTED DISEASES (STDs)

OVERVIEW OF HEALTH IMPACT

According to information from the CDC, "Every year more than 12 million cases of sexually-transmitted disease (STDs) are reported in the United States. These infections result in billions of dollars in preventable health care spending. In addition, the health impact of STDs is particularly severe for women. Because the infections often cause few or no symptoms and may go untreated, women are at risk for complications from STDs, including ectopic (tubal) pregnancy, infertility, chronic pelvic pain, and poor pregnancy outcomes."

Sexually transmitted diseases disproportionately affect the young, the poor, and racial and ethnic minorities. Cervical cancer is also a potential consequence of sexually transmitted infections. STDs and HIV infection are also linked by common risk behaviors; that is, persons who are at high risk for contracting sexually transmitted diseases are also at high risk of acquiring HIV. The presence of STDs has been documented as increasing the transmission and acquisition of HIV infection.

In the United States, the seven most common STDs affecting the health of Americans are: chlamydia, trichomoniasis, gonorrhea, genital warts, genital herpes, hepatitis B, and syphilis. In 1997, chlamydia was the most commonly reported sexually transmitted disease in the United States (526,653 new cases or 207 per 100,000 population). Gonorrhea ranked second with 324,901 cases (122.5 per 100,000). The number of cases of syphilis was much smaller (46,537 new cases, or 17.5 per 100,000 population).

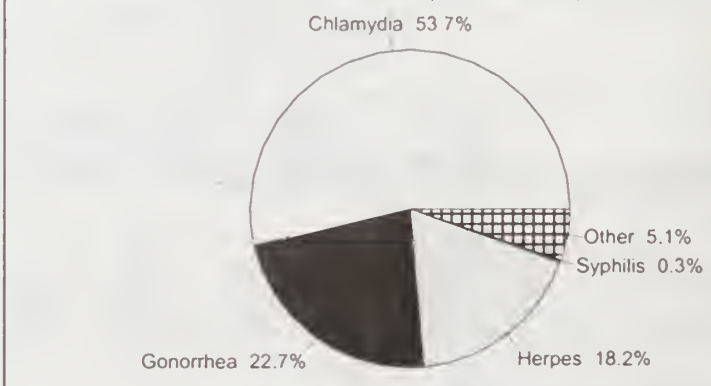
In Nebraska, there were, 5,278 reported cases of all STDs combined in 1998. Chlamydia accounted for more than half of all STD cases in the state in 1994-1998 *(Figure 47)*.

In Nebraska, the number of cases of gonorrhea has decreased by more than one-third in the past 10 years. Nevertheless, gonorrhea comprised 22.7 percent of all cases of sexually transmitted infections in the state in 1994-1998.

Genital herpes cases comprised 18.2 percent of total STD cases in Nebraska during the most recent five-year period (1994-1998), while syphilis accounted for a much smaller proportion (0.3 percent). The number of reported cases of syphilis was relatively small in Nebraska in 1994-1998, with incidence having declined by 62 percent compared to 1989-1993. Other STDs comprised 5.1 percent of all cases of sexually transmitted diseases.

Figure 47

Incidence of Sexually Transmitted Diseases
In Nebraska (1994-1998)



SOURCE: Nebraska Health and Human Services System, Communicable Diseases Division.

CURRENT RATES

Although STD incidence data are available by race/ethnicity for Nebraska, race/ethnicity is unknown for some reported cases. For purposes of this analysis, cases with unknown race or ethnicity were allocated using the distribution of known race/ethnicity cases.

Trends in relative risk of STD infection in the last five years were mixed for racial and ethnic minority groups in Nebraska.

The statewide incidence rates (*Figure 48)* show that rates for African Americans were much higher than rates for any other racial/ethnic group in Nebraska for 1994-1998. Incidence rates for this population group have declined by about 30 percent from the previous five-year period. Still, African Americans were more than sixteen times as likely as white Nebraskans to contract a sexually transmitted disease *(Table 31).*

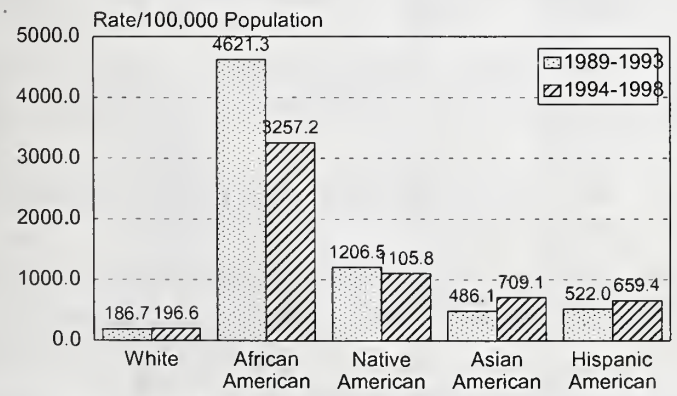
Incidence of sexually transmitted infections was 5.6 times as high for Native Americans as for white Nebraskans. Although this rate represented a decrease from 1989-1993, the incidence was 3.4 times as high for Hispanic Americans as for whites in the state. Among Asian Americans, STD incidence rose moderately from 2.6 in 1989-1993 to 3.6 times the white rate in 1994-1998. Incidence and relative risk of STD infection increased for both Asian American and Hispanic Americans in 1994-1998.

Chlamydia

In 1994-1998, incidence rates for chlamydia infections increased for Native Americans, Asian Americans, and Hispanic Americans in Nebraska. However, rates for whites and African Americans decreased compared to 1989-1993. Despite this decline, reported incidence of chlamydia was 12.4 times as high for African Americans as for whites. For other groups, increased incidence resulted in a higher relative risk. For Native Americans, incidence was 6.6 times the white rate. Hispanic Americans and Asian Americans also experienced higher rates of chlamydia infections, 3.9 and 3.3 times the white rate.

Figure 48

Incidence Rates*--Sexually Transmitted Diseases By Race and Ethnic Origin



SOURCE: Nebraska Health and Human Services System, Communicable Diseases Division.

Table 31
Sexually Transmitted Diseases (STD's)
Incidence Rates and Relative Risk of Infection
For Nebraska Racial and Ethnic Minority Populations

	1989-1993		1994-1998	
	Incidence Rate per 100,000 Population	Relative Risk	Incidence Rate per 100,000 Population	Relative Risk
All STD's				
White	186.7		196.6	
African American	4621.3	24.8	3257.2	16.6
Native American	1206.5	6.5	1105.8	5.6
Asian American	486.1	2.6	709.1	3.6
Hispanic American	522	2.8	659.4	3.4
Chlamydia				
White	127.2		116.6	
African American	1754.6	13.8	1446.1	12.4
Native American	726.4	5.7	770.2	6.6
Asian American	279.5	2.2	384.7	3.3
Hispanic American	319	2.5	454.8	3.9
Gonorrhea				
White	27.6		21.6	
African American	2157.2	78.3	1330.9	61.7
Native American	305.1	11.1	148.5	6.9
Asian American	69.9	2.5	106.8	5.0
Hispanic American	99.1	3.6	88.9	4.1
Herpes				
White	42.7		49.3	
African American	416.8	9.8	297.1	6.0
Native American	82.1	1.9	122.4	2.5
Asian American	72.8	1.7	97.9	2.0
Hispanic American	47.1	1.1	63.2	1.3
Syphilis				
White	0.6		0.3	
African American	44.2	73.9	13.0	38.8
Native American	20.1	33.7	1.4	4.1
Asian American	0.0	0.0	2.0	5.9
Hispanic American	2.0	3.3	1.6	4.7

SOURCE: Nebraska Health and Human Services System, Communicable Diseases Division.

Gonorrhea

Gonorrhea rates declined for whites and for each minority group in Nebraska, except Asian Americans. For Asian Americans, incidence of gonorrhea was up by more than 50 percent in 1994-1998, with relative risk increasing to 5.0 times the rate for whites.

Incidence of gonorrhea among African Americans was 61.7 times the incidence rate for white Nebraskans in 1994-1998. Among Native Americans, gonorrhea rates were 6.9 times as high as the rate for whites. Incidence rates for Hispanic Americans in Nebraska declined but were down by a smaller percentage than white rates, so that relative risk of infection rose to 4.1.

Herpes

Genital herpes incidence rates were up for every racial/ethnic group except African Americans in Nebraska for 1994-1998. For African Americans, incidence was down by 29 percent. However, the 1994-1998 rate of 297.1 new cases per 100,000 population was still 6.0 times as high as the current rate for whites.

Native Americans were 2.5 times as likely as white Nebraskas to become infected with genital herpes. Asian Americans recorded a relative risk of 2.0, while Hispanic Americans were 1.3 times a likely as whites to contract herpes.

Syphillis

Syphilis incidence rates dropped for whites, African Americans, Native Americans, and Hispanic Americans in Nebraska. Although African Americans registered a lower rate of about 13.0 cases per 100,000 population the relative risk was 38.8 in 1994-1998 compared to whites. Both incidence and relative risk decreased substantially – especially for Native Americans who moved from an incidence rate of 20.1 with a relative risk of 33.7 in the previous five-year period to an incidence rate of 1.4 and relative risk rate of 4.1 in 1994-1998. Both Hispanic and Asian Americans recorded a higher incidence of syphilis than Native Americans and whites in 1994-1998.

RISK FACTORS FOR SEXUALLY TRANSMITTED DISEASES

HIGH RISK SEXUAL BEHAVIORS

Number of Sexual Partners: Abstinence or sexual intercourse with one mutually faithful uninfected partner is the only totally effective strategy against STDs. Reducing the number of sexual partners will decrease, but not eliminate, the risk of infection.

Unprotected Intercourse: The use of condoms during sexual intercourse can reduce the risk of infection by sexually transmitted organisms.

Adolescent Intercourse: By the age of 21, approximately one out of every five Americans has required treatment for an STD. The most common method of birth control used by young women, the oral contraceptive pill, does not protect against STDs. Increasing the proportion of adolescents who abstain from sexual activity has been included as a national objective for the year 2000, not only to reduce the incidence of STDs among adolescents, but to also lower the rate of teenage pregnancy.

PROGRESS TOWARD OBJECTIVES

As shown in *Table 32*, progress has been made in Nebraska in decreasing the incidence of gonorrhea among African Americans (by about 28.3 percent since 1984-1988). A further reduction of almost 10 percent will be needed to meet the Nebraska goal of 1200.0. A similar reduction in the incidence of syphilis among African Americans has been achieved in Nebraska, with the 1994-1998 syphilis rate decreasing by 39.3 percent from the baseline. A further reduction of 9.7 percent will be necessary to reach the year 2000 objective of 35.0.

Table 32
Sexually Transmitted Diseases
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline (1984-1988)	Nebraska Current Rate (1994-1998)	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1989	National Current Rate 1997	% Change Current vs. Baseline	National Year 2000 Objective
Cases of gonorrhea per 100,000 population								
African Americans	1856.4	1330.9	-28.3	1200.0	1990.0	812.0	-59.2	650.0
Cases of primary and secondary syphilis per 100,000 population								
African Americans	63.9	38.8	-39.3	35.0	118.0	22.0	-81.4	30.0

SOURCES: Nebraska Health and Human Services System, Communicable Disease Division.
National–Healthy People 2000 Review, 1998-99. Sexually Transmitted Disease Surveillance System, NCHS.

HIV/AIDS

OVERVIEW OF HEALTH IMPACT

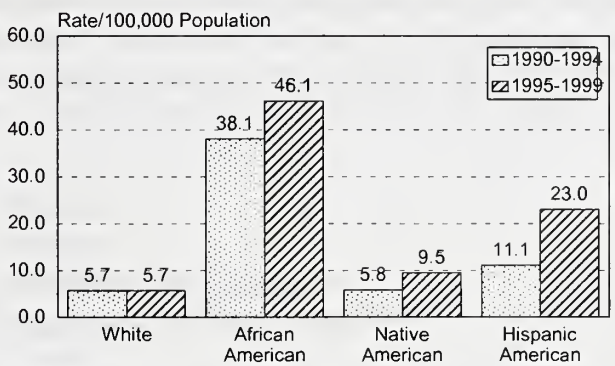
In 1981, AIDS (acquired immunodeficiency syndrome) was identified as a new infectious disease in the United States. By the end of 1998, more than 680,000 cases of AIDS had been reported nationwide, and more than 430,000 people died from AIDS.

According to the Centers for Disease Control and Prevention (CDC), more people in the United States than ever before are living with the human immunodeficiency virus (HIV). The latest estimates indicate that 750,000 to 900,000 people in the United States are currently infected with HIV. However, 200,000 to 250,000 of these persons may not be aware of their infection. HIV infection rates appear to have leveled off at about 40,000 new infections per year.

Although no currently available treatment has been found to cure AIDS, the use of highly active antiretroviral treatment (HAART) has been found to slow the progression of HIV to AIDS. With the advent of this new treatment, deaths due to AIDS and the number of new cases of AIDS had been declining dramatically. Since mid-1998, however, this decline has leveled off, because of limitations in HAART's ability to cause long-term suppression of HIV. Thus, the need for prevention of HIV infection remains and this must be accomplished primarily through modification of personal risk behaviors.

Figure 49

Nebraska Incidence Rates - HIV/AIDS
By Race and Ethnic Origin



SOURCE: Nebraska Health and Human Services System, HIV/AIDS Surveillance Program.

Disparities in the rate of infection among certain racial and ethnic groups, particularly high rates for African Americans and Hispanic Americans, remain a challenge. New treatments have reduced illness, disability and death due to HIV/AIDS, but lack of access to culturally and linguistically appropriate testing and care may limit progress in this area.

In Nebraska, as of December 31, 2000, the total number of AIDS cases reported since record keeping began was 1,086. Of these, males accounted for 87 percent and females, 13 percent. Nearly three-fourths of all AIDS cases in the state (73 percent) occurred among the white population. Seventeen percent of cases were diagnosed among African Americans and 8 percent among Hispanic Americans. Asian Americans and Native Americans each accounted for about 1 percent of all AIDS cases.

CURRENT RATES

INCIDENCE

According to the CDC, the incidence of AIDS increased more rapidly among African Americans and persons of Hispanic origin than among white Americans. In 1999, African Americans and Hispanic Americans together accounted for more than half of all cases among men and women with 37 percent of the national total for African Americans and 18 percent for Hispanics. These groups only comprised 25 percent of the total U.S. population. As in past years, most women with AIDS were African American or Hispanic American.

As is true nationwide, minorities in Nebraska are over-represented among persons who have AIDS. Although minorities make up only about 10 percent of the population of the state, 27 percent of cumulative AIDS cases through 1999 occurred among minority Nebraskans.

In Nebraska, ten-year trends by race or ethnicity are difficult to establish because of the small number of cases reported each year. Thus, rates for two five-year periods will be compared instead. For white Nebraskans, the rate has remained stable at 5.7 new cases per 100,000 population *(Figure 49)*. Incidence of AIDS rose for all four racial and ethnic minority groups in the state for 1994-1998 versus 1989-1993.

Among African Americans, the 1995-1999 rate was 46.1, up 21 percent from the previous five-year period *(Table 33)*. Relative risk of contracting AIDS was highest for African Americans, with the incidence rate 8.1 times higher for this minority group than for whites in the state.

For Hispanic Americans, the AIDS incidence rate more than doubled to 23.0 cases diagnosed per 100,000 population in 1995-1999. During this five-year period, Hispanic Nebraskans were four times as likely as whites to be diagnosed with AIDS. Rates for Native Americans and Asian Americans were 9.5 and 3.8 per 100,000 population *(Table 33)*, compared with the state's white rate of 5.7 per 100,000 population.

Table 33
HIV/AIDS
Incidence Rates and Relative Risk of Disease
For Nebraska Racial and Ethnic Minority Populations

	1990-1994		1995-1999	
	Incidence Rate per 100,000 Population	Relative Risk	Incidence Rate per 100,000 Population	Relative Risk
HIV/AIDS				
White	5.7		5.7	
African American	38.1	6.7	46.1	8.1
Native American	5.8	1.0	9.5	1.7
Asian American	*	*	3.8	0.7
Hispanic American	11.1	1.9	23.0	4.0

*Fewer than five cases over the five-year period.

SOURCE: Nebraska Health and Human Services System, HIV/AIDS Surveillance Program.

MORTALITY RATES

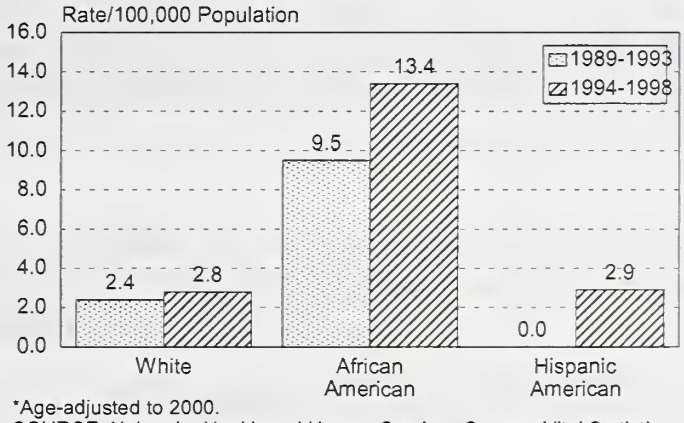
The AIDS death rate has declined nationally. In Nebraska, deaths due to this disease decreased from 102 in 1995 to 66 in 1999.

Currently, AIDS has moved out of the top 15 causes of death for the overall population in the nation and the state.

In Nebraska, AIDS ranked ninth for African Americans and thirteenth for Hispanic Americans as a cause of death in 1994-1998. For whites, the age-adjusted mortality rate for AIDS increased from the previous five years to 2.8 deaths per 100,000 population for 1994-1998 *(Figure 50, Table 34)*.

Figure 50

Nebraska Mortality Rates* - HIV/AIDS
By Race and Ethnic Origin



*Age-adjusted to 2000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

For African Americans, the 1994-1998 rate (13.4) is 4.8 times the white rate, an increase of more than 40 percent from the rate for 1989-1993. For African American males in Nebraska, the current death rate due to HIV/AIDS is 4.2 times the rate for white males. African American females were 9.8 times as likely as their white counterparts to die from AIDS. The mortality rate for Hispanic Nebraskans (2.9) is about equal the rate for whites. The numbers of deaths from this cause for Native Americans and Asian Americans were too small to be reported.

Table 34
HIV/AIDS
Mortality Rates and Relative Risk of Mortality
For Nebraska Racial/Ethnic Minority Populations

	1989-1993 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk			1994-1998 Age-Adjusted* Mortality Rate per 100,000 Population	Relative Risk		
		Total	Males	Females		Total	Males	Females
HIV/AIDS								
White	2.4				2.8			
African American	9.5	4.0	3.9	8.5	13.4	4.8	4.2	9.8
Native American	0.0	0.0	0.0	0.0	**	**	**	**
Asian American	**	**	**	**	**	**	**	**
Hispanic American	**	**	**	**	2.9	1.0	1.1	0.0

*Age-adjusted to 2000.
**Fewer than five deaths during the five-year period.
SOURCE: Nebraska Vital Statistics data, 1989-1993 and 1994-1998. Nebraska Health and Human Services System.

YEARS OF POTENTIAL LIFE LOST (YPLL) DUE TO AIDS

Altogether, deaths from AIDS in Nebraska from 1994 through 1998 accounted for an estimated 518 years of potential life lost annually among racial and ethnic minority residents of the state *(Table 35)*. This number was 1.77 times the YPLL average for AIDS for 1989-1993 (293 years).

YPLL rates have increased for each racial and ethnic group in Nebraska, except for Asian Americans. In 1994-1998, African Americans lost 4.7 times as many years of potential life per person due to HIV/AIDS as whites in the state, while Hispanics lost 1.1 times as many years of potential life per person as whites in Nebraska.

Table 35
Years of Potential Life Lost – HIV/AIDS
Based on 75 Productive Years of Life
For Nebraska Racial and Ethnic Minority Populations

	1989-1993			1994-1998		
	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*	# of Total YPLL	Age-Adjusted Rate/100,000	Minority-to-White Ratio*
HIV/AIDS						
White	6,462	86.5		7,837	103.9	
African American	985	346.0	4.0	1,621	493.5	4.7
Native American	0	0.0	0.0	46	54.4	0.5
Asian American	46	43.3	0.5	46	32.5	0.3
Hispanic American	142	89.9	1.0	360	113.6	1.1
Average/Year (Minorities)	293			518		

*Minority Age-Adjusted YPLL Rate/100,000 divided by White Age-Adjusted YPLL Rate/100,000.
SOURCE: Nebraska Health and Human Services System, Vital Statistics.

RISK FACTORS FOR AIDS/HIV INFECTION

Transmission of the human immunodeficiency virus occurs primarily in three ways: sexual contact, intravenous drug use, and perinatal contact with an infected mother. (The screening of donated blood since 1985 for HIV antibodies has nearly eliminated blood transfusions as a risk for acquiring AIDS).

Although more than half of all reported cases of AIDS occurred among men who had sex with men, increasing numbers of women, children, adolescents and injectable drug users are being infected. The fastest-growing means of HIV transmission, especially among women, is heterosexual contact.

In Nebraska, based on cumulative reported cases of AIDS through 1999, the majority of cases occurred among men who have sex with men (57 percent). Nine percent of cases were reported for each of the following categories: persons who use injectable drugs; men who have sex with men, and use injectable drugs; and persons having heterosexual contacts.

High Risk Sexual Behaviors

Number of Sexual Partners: The risk of HIV infection is known to increase with the number of sexual partners. Abstinence or sexual intercourse with one mutually faithful uninfected partner is the only totally effective prevention strategy against HIV infection.

Anal Intercourse: The concentration of AIDS cases among men who had sex with other men is due in large part to the practice of anal intercourse. Anal intercourse can cause minor traumatic disruption of the rectal mucosa, which facilitates transmission of the virus. Anal intercourse is also practiced by some heterosexual couples.

Unprotected Intercourse: HIV is most commonly transmitted through unprotected sexual intercourse. The use of condoms during sexual intercourse can reduce the risk of HIV infections. However, even with the proper use of condoms, reduction of the risk can not be assured.

Adolescent Intercourse: As noted previously in this report, the incidence of sexually transmitted diseases among adolescents is especially high. In addition, the most common method of birth control used by young women, the oral contraceptive pill, does not protect against the spread of HIV. An increase in the percentage of adolescents who abstain from intercourse would help to reduce the spread of HIV and other STDs.

Substance Abuse

Intravenous drug users account for nearly one-third of the cumulative AIDS cases in the United States. The transmission of AIDS within this group is the result of sharing needles and syringes used for injection of drugs.

Perinatal Contact

In the 1990s, before perinatal preventive treatments were available, 1,000 to 2,000 babies were born with HIV each year in the United States. In 1994 and 1995, the Public Health Service recommended routinely counseling and voluntarily testing pregnant women for HIV and offering zidovudine (AZT) to infected women during pregnancy and delivery and for the infant after birth. As a result, perinatally acquired AIDS cases declined 66 percent in the U.S. In Nebraska, pediatric AIDS cases make up about one percent of all cases.

PROGRESS TOWARD OBJECTIVES

It is important to note that while these national data provide a fairly accurate view of the HIV/AIDS trend, these do not include data from persons tested anonymously. About two-thirds of people living with HIV infections are already tested and are aware of their status.

Based on an increasing trend, the Nebraska 2000 objective for number of diagnosed cases of AIDS for African Americans was set to increase to no more than 20 for the year *(Table 36)*. This objective was achieved, based on the average annual incidence for 1995-1999 of 15 cases.

Table 36
HIV/AIDS
Baseline, Current Data and Year 2000 Objectives
For U.S. and Nebraska Racial and Ethnic Minority Populations

Indicators and Target Groups	Nebraska Baseline 1987-1990 Average	Nebraska Current 1995-1999 Average	% Change Current vs. Baseline	Nebraska Year 2000 Objective	National Baseline 1989	National Current Rate 1996	% Change Current vs. Baseline	National Year 2000 Objective
Annual incidence of diagnosed AIDS* cases								
African Americans (#)	6.0	15.0	150.0	20.0				
Rate/100,000 population aged 18+		34.3			44.4	110.9	149.8	136.0
Hispanic Americans (#)	1.5	9.8	553.3	7.0				
Rate/100,000 population aged 18+		22.5			34.9	48.4	38.7	76.0

*Does not include HIV cases.
NOTE: Beginning with 1996, national rates are figured for people 13 years of age or older.

SOURCE: Nebraska Health and Human Services System, HIV/AIDS Surveillance Program.
National - Healthy People 2000 Review, 1998-99. HIV/AIDS Surveillance System, CDC.

For Hispanic Americans, the target number was set at no more than 7 diagnosed new cases of AIDS in the year 2000. Based on 1995-1999 incidence, the average number of cases per year was 9.8. The year 2000 objective for AIDS incidence for this population group was not met.

Immunization

Neither the 1992 nor the 1996 Minority Health Status Reports provided any information concerning immunization status in Nebraska, although immunizations were discussed in the 1996 "Nebraska Year 2000 Health Goals and Objectives" report. Detailed data on immunization levels were only available through retrospective studies of immunization records of school-aged children or through immunization clinic records.

In this report, current Nebraska data are available for some population groups from a national survey conducted by CDC.

OVERVIEW OF HEALTH IMPACT

According to the Nebraska Health and Human Services System,

> *"The year 2000 goal of the Childhood Immunization Initiative is to have at least 90 percent of all children immunized by 2 years of age. Currently the immunization rate for 2-year-olds in the U.S. is 75 percent and Nebraska's immunization rate is at 82 percent for 2-year-olds and younger. To be minimally immunized, a 2-year-old will have completed a series of 4 doses of diphtheria/ tetatnus/pertussis, 3 doses of polio vaccine, and 1 dose of measles/mumps/rubella vaccine. The Nebraska Immunization Program provides funding, vaccines and training support to immunization clinics and private providers throughout the state for infants to entering college freshmen. It is the goal of the Immunization Program to enable communities to provide, on a local level, a preventive health program designed to meet each area's individual needs while maintaining quality of service."*

VACCINE-PREVENTABLE DISEASES AND RISK FACTORS

Before **Polio** vaccine was developed, 13,000 to 20,000 cases of paralytic polio, mostly among children, were reported yearly, in the United States. With the advent of the vaccine and polio immunization programs, paralytic polio has been eliminated in the United States.

Other vaccine-preventable diseases include **Haemophilus influenza type b (Hib meningitis).** Before Hib vaccine became available, there were approximately 20,000 invasive Hib cases annually in the United States. Hib meningitis was the cause of 600 child deaths each year and left many surviving children with deafness, seizures or mental retardation. Since the conjugate Hib vaccine was introduced in 1987, incidence of Hib disease has declined by 98 percent. Fewer than 10 deaths per year were attributed to Hib disease nationwide in 1994-1998.

Whooping cough (or pertussis) cases have been on the rise since 1980; however, the number of cases is still much lower than levels seen before pertussis vaccine was available. In 1998, 7,405 cases were reported. In 1990-1996, 57 fatal cases were reported nationally with 49 of those occurring in children less than 6 months of age. During the 1970's there were concerns about the safety of pertussis immunizations. However, the newer vaccine (acellular or DTap), available since 1971, is associated with fewer adverse reactions.

Rubella or German Measles is a mild disease in children and adults, but has a dangerous effect on infants born to mothers who contract the virus during the first trimester of pregnancy. Up to 90 percent of these children develop congenital rubella syndrome (CRS), resulting in deafness, blindness, mental retardation, heart defects, or cataracts. Incidence of CRS has declined dramatically since rubella vaccine began to be used widely. Currently, an average of less than 200 cases of rubella are reported annually in the United States.

Measles. Before measles immunizations were available, there were 3 to 4 million measles cases in the United States each year, with an average of 450 measles-related deaths reported annually. Since use of the measles vaccine has become widespread, the number of cases of this disease has declined by more than 99 percent.

The CDC says of **Varicella (Chickenpox):**

"Chickenpox is always in the community and is highly contagious. Prior to the licensing of chicken pox vaccine in 1995, almost all persons in the U.S. had suffered from chicken pox by adulthood. Chickenpox was responsible for an estimated 4 million cases, 11,000 hospitalizations, and 100 deaths each year." This disease did not become nationally notifiable until January 1, 1999, so current incidence data are unavailable.

Other vaccine-preventable diseases include **Hepatitis B.** Currently there are about 1.25 million people who are infected with this virus. Of these, about 4,000 to 5,000 people die from related liver disease each year. Of the infants and children who become infected with life-long hepatitis B virus, one-fourth would be expected to die of related liver disease as adults. Hepatitis B is spread through contact with the blood of an infected person or by having sex with an infected person.

Mumps had a nationwide incidence of about 666 cases in 1998. Mumps is a mild viral disease, which may develop into mild meningitis and may result in hearing loss. Inflammation of the testicles or ovaries may also occur.

Tetanus or Lock-Jaw is another vaccine-preventable bacterial disease. It is severe and often fatal. The bacteria that cause tetanus are mainly borne by soil dust and dung and mainly affects adults. In 1998, there were 41 cases of tetanus reported nationwide.

Diphtheria is a very serious and sometime fatal disease caused by poisons secreted by the bacteria. Diphtheria frequently causes heart attacks and nerve problems. The death rate ranges as high as 5 to 20 percent among the very young and elderly people. There were no reported cases of diphtheria in the United States in 1998.

Influenza. Influenza is a highly infectious viral disease. Immunization against influenza is recommended annually for the elderly (age 65 and older) and for persons who have risk factors such as heart problems, lung diseases, metabolic diseases such as diabetes, anemia or other blood disorders, or kidney disease. In Nebraska, there were 16 deaths due to influenza in 1998.

Pneumonia. Vaccine is available to prevent pneumococcal pneumonia (a type of bacterial disease), which can be a serious disease resulting in hospitalization and death. As with influenza, immunization is advisable for persons aged 65 and older and for those with long-term health problems such as heart disease, alcoholism, lung disease, diabetes or cirrhosis of the liver. Pneumococcal vaccine is usually a once-in-a-lifetime shot. There were 594 deaths from pneumonia in 1998 in Nebraska.

CURRENT RATES AND TRENDS

IMMUNIZATION LEVELS IN CHILDREN

According to the Centers for Disease Control and Preventions's 1999 Immunization Survey, among children aged 19-35 months, coverage for the basic 4:3:1:3 immunization series (4 or more doses of diphtheria – tetanus – pertussis [DTP] vaccine, 3 or more doses of poliovirus vaccine, 1 or more doses of any measles – containing vaccine (MCV), and 3 or more doses of Haemophilus influenzae type b [Hib] vaccine) was 78.4 percent for the United States, and 81.8 percent for Nebraska.

Coverage was slightly higher for the 4:3:1 series which contains all of the above except the Hib vaccine (79.9 percent nationwide and 83.7 percent in Nebraska). Coverage has improved since 1995 when 75 percent of American children in this age group had received the 4:3:1 series. In Nebraska 72 percent of these children had these vaccinations.

Among school-aged children in Nebraska, immunization rates for individual vaccines being tracked all exceeded 97 percent in 1999.

IMMUNIZATION BARRIERS

There are several barriers to childhood immunization. First, the complexity of the recommended immunization schedule may make it difficult and time consuming for parents to have their children immunized. At least five clinic visits before age two are recommended.

Secondly, the economic cost involved, especially to poor people who must pay out-of-pocket where no sort of insurance coverage exists, makes it difficult for this group to obtain adequate vaccination for their children. However, the Nebraska Children's Health Insurance Program (CHIP), which provides coverage for uninsured low-income children who are not otherwise eligible for Medicaid, makes vaccinations available to many low-income children.

Another barrier is the fact that some parents may not know the dangers that lack of vaccination poses to the health of their children, and thus do not make immunizations for their children a priority.

These barriers are also applicable to adults who need to be vaccinated. Adults may not be aware of the dangers posed by lack of vaccination. Lack of insurance coverage is another factor preventing adults from receiving needed immunizations. However, as of 1993 changes in Medicare have made it possible for adults in this program to receive reimbursement for flu and pneumonia vaccinations.

Another factor having an impact on immunization levels is the presence of religious or cultural barriers prohibiting vaccinations.

PROGRESS TOWARD OBJECTIVES

According to the 1999 U.S. National Immunization Survey data, Nebraska vaccination coverage for children 19-35 months of age exceeded the national coverage rates, although generally differences were not statistically significant.

Nebraska's coverage ranged from a low of 58.4 percent for the new chickenpox vaccine to a high of 96.3 percent for 3 or more DTP vaccinations (*Table 37).* The Nebraska Year 2000 objective was to increase to 90 percent the proportion of children aged 19-35 months who received the 4:3:1 series. In 1999, 84 percent had this complete series, so the Year 2000 objective will not be achieved.

Table 37
Estimated Vaccine Coverage Among Children Aged 19 to 35 Months of Age
Individual Vaccines and Selected Vaccination Series
1999 National Immunization Survey

	Percentage of Children Aged 19 to 35 Months Who Have Received Vaccination									
	Total Population		White Non-Hispanic		Black Non-Hispanic		Hispanic		Native American	Asian American
	U.S.	Nebraska	U.S.	Nebraska	U.S.	Nebraska	U.S.	Nebraska	U.S.	U.S.
4:3:1 Series*	79.9	83.7	82.0	83.2	75.1	NA	77.3	NA	77.6	82.4
4:3:1:3 Series*	78.4	81.8	81.0	82.2	73.8	NA	74.9	NA	75.0	77.4
4:3:1:3:3 Series*	73.2	79.8	75.6	80.1	69.4	NA	69.6	NA	NA	73.4
3+ DTP (diphtheria - tetanus - pertussis)	95.9	96.3	96.6	96.3	94.4	NA	95.1	96.3	94.7	96.5
4+ DTP (diphtheria - tetanus - pertussis)	83.3	86.8	85.5	87.2	79.0	NA	80.2	NA	80.2	86.8
3+ Poliovirus vaccine	89.6	91.7	90.3	91.6	87.0	NA	89.4	92.1	88.2	90.1
1+ MMR (measles - mumps - rubella)	91.5	91.8	92.4	91.4	89.8	NA	90.2	92.0	91.7	92.7
3+ Hib (*Haemophilus influenzae* type b)	93.5	93.4	94.8	94.5	91.8	NA	92.0	NA	91.4	90.2
3+ HepB (hepatitis B)	88.1	92.9	88.9	93.9	86.5	NA	87.3	NA	NA	88.2
1+ Varicella (chickenpox) at or after first birthday	57.5	58.4	56.0	56.4	57.6	NA	60.5	NA	NA	64.0

*4:3:1 Series = 4 or more doses of DTP (diphtheria and tetanus toxoids and pertussis vaccine), 3 or more doses of poliovirus vaccine, and 1 or more doses of any measles-containing vaccine (MCV)
*4:3:1:3 Series = same as 4:3:1 Series above + 3 or more doses of *Haemophilus influenzae* type b (Hib) vaccine
*4:3:1:3:3 Series = same as 4:3:1:3 Series above + 3 or more doses of hepatitis B vaccine

SOURCE: Centers for Disease Control and Prevention, National Immunization Survey, 1999.

Nationally, Asian Americans and white non-Hispanics had better coverage when the three immunization series are considered *(Table 37)*.

African Americans, Hispanic and Native Americans have lower coverage rates than the overall rates nationally.

Unfortunately, the sample sizes for African Americans, Native Americans and Asian Americans were too small for any coverage estimations to be made for Nebraska.

For Hispanic Americans, Nebraska estimates were made for three individual vaccines but not for the three series. Individual vaccine coverage estimates were comparable to overall Nebraska rates.

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Disclaimer

While text, citations and data for health indicators were, to the best of the author's knowledge, current as the report was prepared, there may have been subsequent changes or developments which could alter the information provided herein.

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